Environment Profile of Pudukottai District

-Final Report

Submitted to:

The Director of Environment,
Government of Tamilnadu, Chennai - 600 083.

Tirumayam Fort

Rresearch and Development Council,
20/1 First main road, Karpagam Gardens, Adyar, Chennai - 600 020.

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INTRODUCTION

1. INTRODUCTION

1.1 The Context

Tamilnadu has been endowed with multitude of natural resources. It is essential to manage these resources judiciously in order to achieve a sustainable development in all sectors. The current opinion and inferences aired on environment and natural resources including land, soil, water, air, and the life support system like forests, indicate that these systems are threatened by serious levels of degradation . But information relating to individual sectors lie fragmented. To manage the environment in a holistic manner and to develop an environment friendly sustainable development perspective, it becomes necessary to identify the gaps in the present management of resource bases. This warrants a strong data-base on the environmental matters of the state.

Towards realising this goal, an initiative has been taken by the Directorate of Environment, a nodal agency for management of environment issues in Tamil nadu. The purpose of such an initiative is to collate information on resources' use in various sectors that have greater bearing on environment in general and on the quality of life of the people in particular. It is considered appropriate to build a database on environmental status for each district, as it is a unit of administration. The Directorate has launched the project of preparation of district environmental profile with the twin objectives of

- *Providing a bench mark information system to develop an environment action plan in future.*
- *Opening up avenues for formulating a framework for Tamilnadu's Environmental Status Report.*

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1.2 Aspects of the study

Environment encompasses a wide area involving almost all field of living beings and their surroundings. These aspects can broadly be brought into the following categories:

- *Basic information about the district,*
- *District's natural resources,*
- *Environment factors and their status and*
- *Environement information.*

These broad categories include the following aspects:
Natural Resources like soil and mineral resources , water, land use, flora and fauna, wet land habitats, potential hot spots, population and its characteristics

The use pattern and the trends of afforestation , population , soil and water conservation, protection of wild life and conservation of natural environment, Environment stress in respect of exploitation of resources, incidence of natural disasters, air, water and soil pollution, industrial effluents, wastes and sewage disposal, density of population, growing urbanisation and slum development, availability of drinking water, housing and toilet installations;
Environment impact on

- *ecology , environment in proportion to generation and exploitation of natural resources*
- *population, pollution, health hazards.*
- *environment and tourism development*
- *urban services, their impact on environment improvement*
- *energy development, energy consumption and exploitation , their impact on environment*
- *information about environment institutes, environment NGOs.*

1.3 Field Operation

Detailed data sheets have been prepared and provided by the Directorate of Environment for each aspect of environment to obtain secondary level data by approaching various government departments, and nodal agencies.

With the detailed data sheets, the respective departments and directorates at state level were contacted to obtain relevant data. Wherever applicable and necessary, district level offices were also contacted to obtain the required data/facts. In case of departments like meteorology, geology etc. their regional offices were visited to obtain the basic figures. During such visits, discussions with the official concerned were held on the nature and trend of the data available with them and their opinions on such trend status to accommodate genuine field level intricacies. In majority of the departments, there were procedural delays and also limitations on the data availability and access to the data. A sample level cross verification of such data collection need to be organised to ensure quality and standard in data collection.

1.4 Study Period

The period of reference for the study varies for each aspect depending upon its significance and availability. However, the aspects that are involved in trend analysis have basic data since 1951. The latest data availability period pertains to 1995-96.

GENERAL PROFILE

2. GENERAL PROFILE

2.1 Historical background

Pudukuttai was formerly a princely state ruled by Rajas with the title "Thondaimans". The present Pudukottai district came into existence on 14-1-1974 encompassing the entire princely state of Pudukottai and parts of Thiruchirapalli and Thanjavur districts. The former princely state extended over Pudukottai taluks with Pudukottai town as its headquarters.

In sangam literature like "Agananooru" and "Purananooru" a few villages of this district like Kodumbur, Oliamamangalam and Edayathur find a mention. The district was a part of the Chola Kingdom till the 15th century and later on Muslim rulers, Naickers and the Marathas who ruled the Cholamandalam exercised control over Pudukottai too till the 17th century. Then it came under the authority of Thondaiman kings till it was merged with independent India.

The early settlers of Pudukottai region are considered to be Kurumbars whose descendants can still be seen in Sellakudy, Avanipatty, Vaishinkoil and Thennankudi villages. Inscriptious at Thirukogarnam, Tirumayam, Kudumiyamalai, Malayakoil, Sithannavasal and Narthamalai indicate about the flourishing foreign trade that prevailed even before I st century B.C.

2.2 Administrative set up

Pudukottai district has an area of 4657 sq km. The district lies in between 9° 50' and 10° 40' north latitude and 78° 25' and 79° 15' east longtitude. There are two Revenue divisions namely Pudukottai and Aranthangi. The boundries of this district are Thanjavur district in north, Sivagangai in south, Trichirapalli in the west and Bay of Bengal in the east. The administrative units of the district consists of both revenue villages and village panchayats besides townpanchayats and municipalities.

Pudukkottai district comprises 7 taluks, 13 blocks and 765 villages. As regards to the hierarchy of administrative arrangement, there are 2 municipalities, 8 town panchayats and 498 village panchayats in the district. The detail;s regarding talukwise number of blocks, villages, village panchayats, town panchayats and municipalities are given in Table 1.

Taluk	Block	R.Village	Panchayats	TP	Municipality
1.Pudukkotai	1	41	28	-	1
2.Gandharvakottai	1	35	36	-	-
3.Thirumayam	3	148	107	2	-
4.Alangudi	2	123	87	3	-
5.Aranthangi	1	96	52	-	1
6.Kulathur	3	162	125	3	-
7.Avudaiyarkoil	2	160	63	-	-
Total	**13**	**765**	**498**	**8**	**2**

2.3 CLIMATE

2.3.1 Temperature

The climatological features of the district have been observed from the meterological station at Kudimianmalai, maintained by Agricultural Department. The features are given in the table below.

Factors	S.W. Monsoon	N.E Monsoon	Winter	Summer
Monthly temperature max / min (°C)	31.8/29.9	28.3/25.4	27.4/25.7	32.4/29.3
Temperature (°C)	30.8	26.7	26.5	31.2
Relative Humidity (%)	72.5	80.3	78.2	73.3
Wind speed (Km/Hr)	9.8	4.57	4.1	5.2
Sunshine (hrs/day)	6.0	5.6	8.76	8.57

2.3.2 RAIN FALL

The normal rainfall for the district has been 800 mm. However, during the two decades the district has experienced rainfall only below normal. Most of the rains occur during north east monsoon. The seasonwise rainfall details for the year of 1995-96 given in the following table.

Seasonwise rainfall : 1995-96		
Season	**Normal (mm)**	**Actual (mm)**
South west	393.9	79.0
North east	404.7	101.0
Winter	52.3	19.0
Hot weather	132.4	16.0

The monthly average rain fall of the district was 77.13 mm in 1991-96. The *heaviest rainfall in the district used to be received in the month of* November (162.2mm). The avarage humidity is 75.8%. The relevant meterological information for Pudukkottai district is given in Table 2.

2.4 Demography

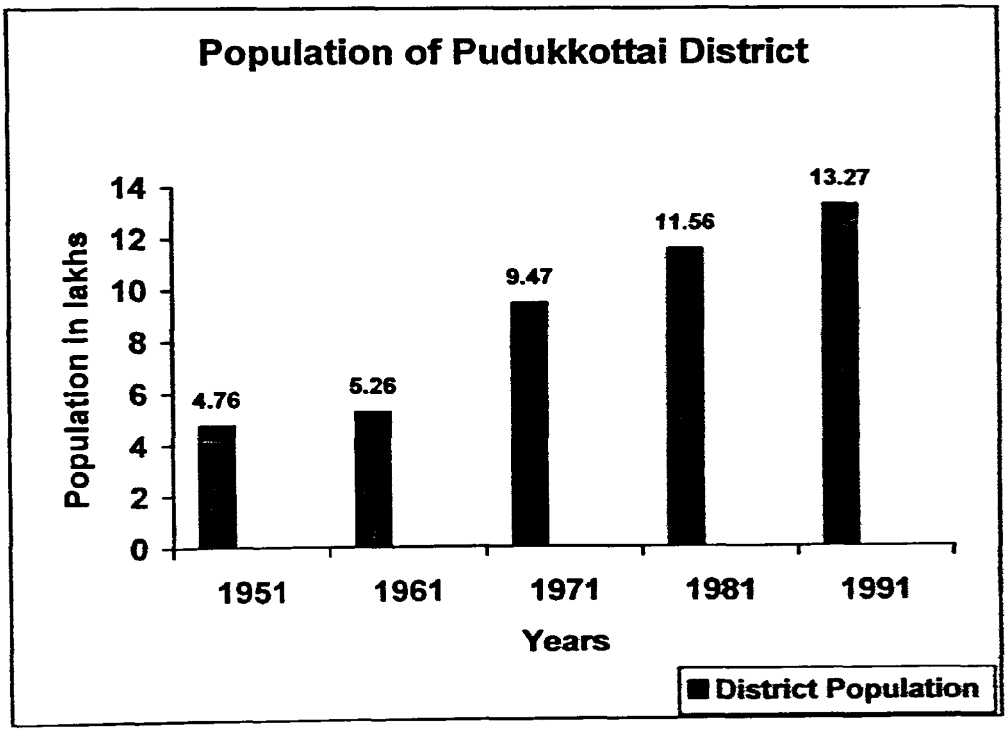
The population growth of Pudukkottai district over the four decades (1981-91) and the salient characteristics of the population like birth rate, death rate, infant mortality rate and level of literacy are presented in the folowing sections (Refer Tables 3,4 and 5)

2.4.1 Population

Pudukkottai district has experienced an average decadal growth rate of 31.8% during the period 1951-91. The total population for the district in 1951 census was only 4.8 lakhs whereas, it has grown to upto 13.3 lakhs in 1991.

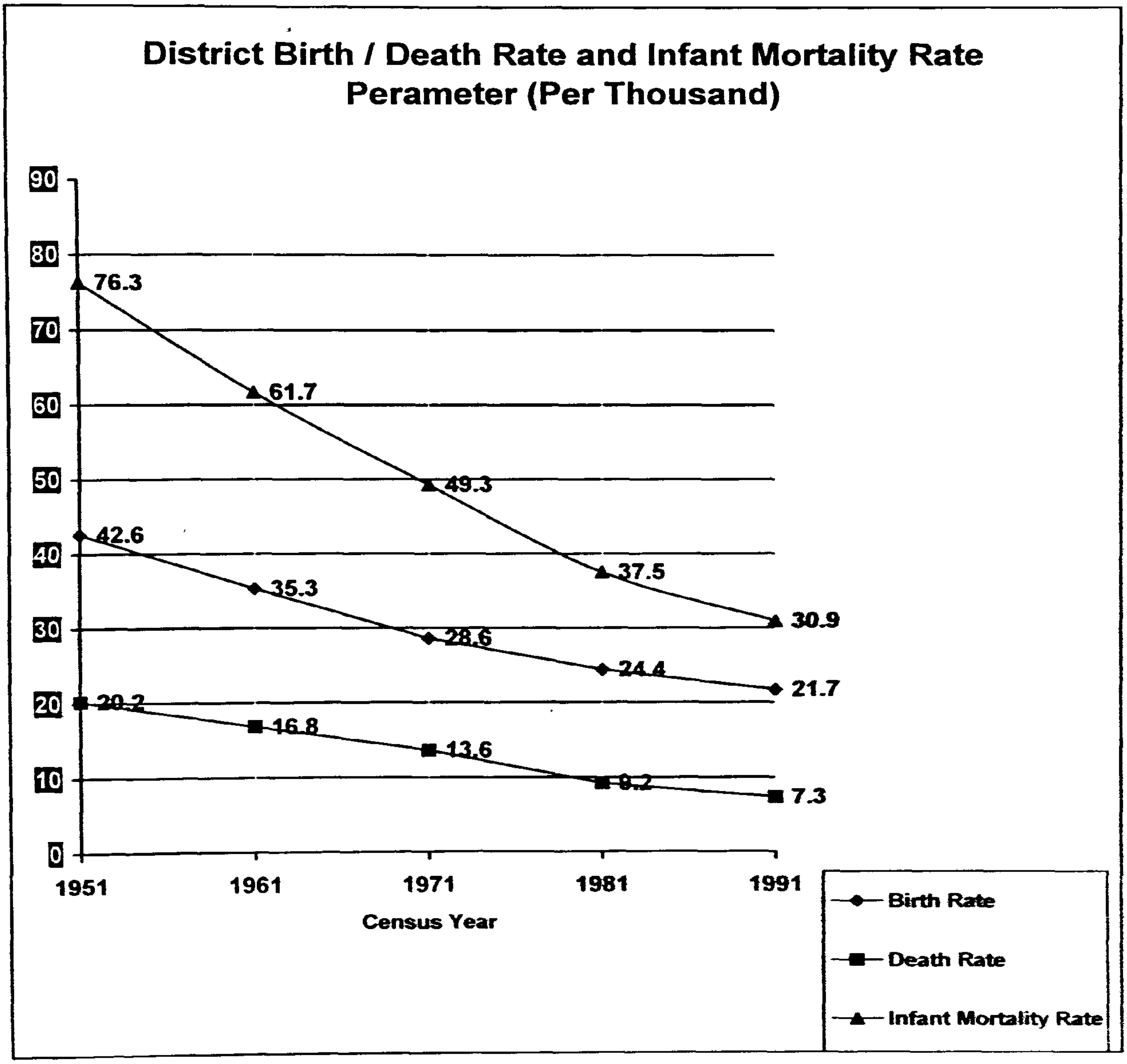
Kulathur, Alangudi and Tirumayam taluks are the most populous ones having more than 2.3 lakhs population each as per 1991 census. Gandarvakkottai taluk has the least population of 71,700. Talukwise decadal population is given in table below. (Table 3)

Taluk	1991
Pudukkotai	176657
Gandharvakottai	71700
Thirumayam	229108
Alangudi	235708
Aranthangi	173878
Kulathur	299480
Avudaiyarkoil	140617
Total	**1327148**



2.4.2 Trend in Birth/Death Rate and Infant Mortality Rate

The birth rate for Pudukkottai district is 21.7 in 1991 which is nearly half of the rate as compared to the birth rate in 1951. The first three decades showed a significant decline in birth rate. In respect of death rate the decline is gradual every year and the death rate is only 7.3 in 1991, which is below the state average. The infant mortality rate has also come down from 76.3 (1951)to 30.9 (1991). (Table 4)



2.4.3 Literacy Level Among the Population

The literacy rate in Pudukkottai district as per 1981census was 38.7 hardly a little over a third ofthe total population. In the next decade, the rate has increased to 49.7(1991 census). Similarly the estimated figure for 1996 is also higher at 51.8%. Only 43.6% of total women population in the district are literatesas per 1996 projections. (Table 5)

LITERCY, 1991	
Total population	1327148
% literates	49.7
% male literates	61.7
% female literates	37.7

RESOURCE - AVAILABILITY, USE AND ENVIRONMENT STATUS

3. Resource - Availability, use and Environment status

3.1. Land Resources

The total geographycal area of the district is 4657.24 Sq.km., the biggest taluk area wise being Kulathur and the smallest Pudukottai. Taluk-wise geographical areas are,

Taluk	Area sq.km.
Pudukkotai	284.06
Gandharvakottai	604.94
Thirumayam	664.60
Alangudi	717.43
Aranthangi	419.91
Kulathur	1322.94
Avudaiyarkoil	643.36
Total	**4657.24**

3.2 Land use pattern

3.2.1 Forests

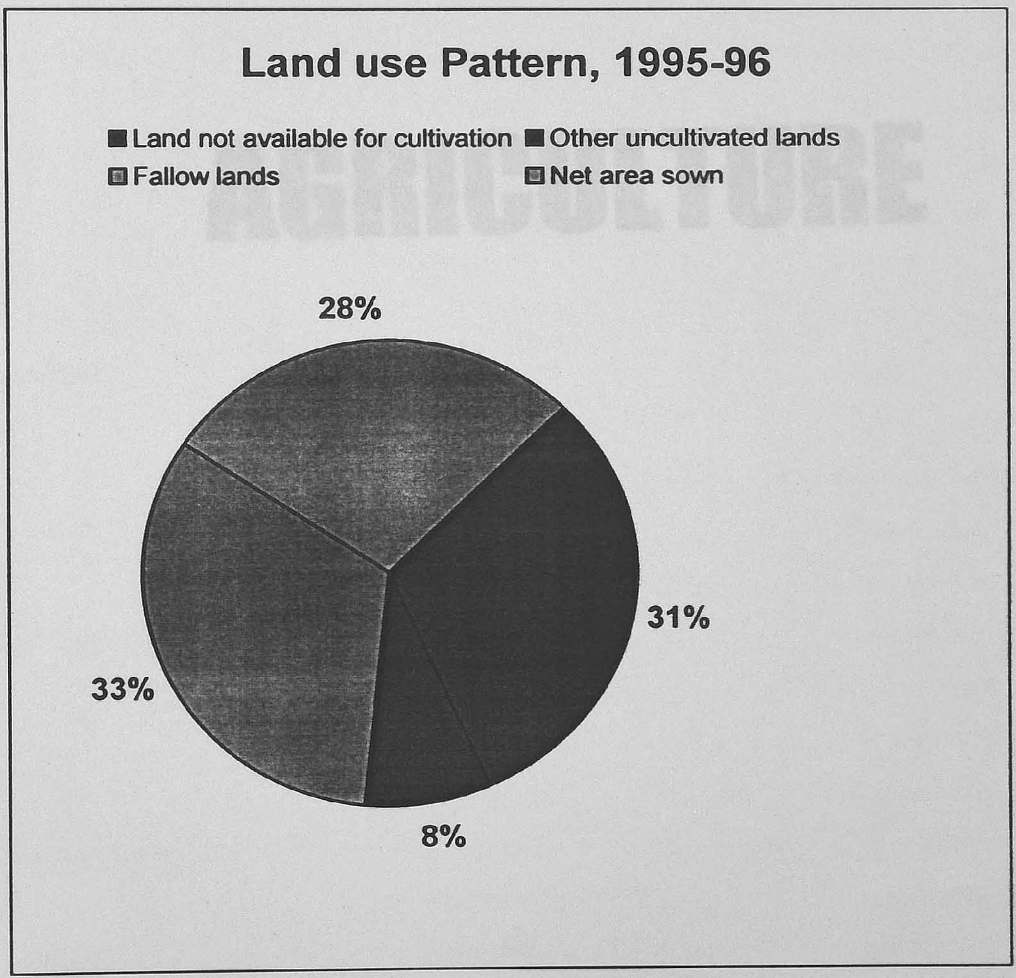
Reserved forests and reserved lands occupy 237.13 sq.km., as per 1995 - 96 data and account for 5.09% of the total area. (Table 6)

3.2.2 Other land uses

Non forest areas put to other uses are as follows:

Category	Area in sq.km.,	% of total area
Lands not available for cultivation	1368.84	29.39
Other cultivated lands	358.97	7.71
Fallow lands	1447.89	31.09
Net area sown	1244.61	26.72

The land utilisation pattern is illustrated in the pie chart:



AGRICULTURE

4. Agriculture

4.1 Soils

The major soil types, in the order of their extent, are laterite, mixed and red loamy types. About one fourth of the soils suffer from one problem or other, the main problems being salinity/ alkalinity. (Table 7 and 8)

4.2 Crops cultivated

The important cultivated crops are as follows :

Category	Common name	Botanical name
Cereals	*Rice*	*Oryza sativa*
	Cholam	*Sorghum bicolot*
	Varagu	*Paspalum scrobiculation*
	Ragi	*Eleusine coracana*
	Maize	*Zea mays*
	Cumbu	*Pennisetum typhoides*
Pulses	*Red gram*	*Cajanus cajan*
	Cow pea	*Vigna unguiculata*
	Horse gram	*Dolicos biflorus*
	Black gram	*Phaseolus mungo*
	Green gram	*Phaseolus aureus*
Oil seeds	*Ground nut*	*Arachis hypogaea*
	Coconut	*Cocus nucifera*
	Gingelly	*Sesamum indicum*
	Soya bean	*Glycine soya*
Condiments	*Chillies*	*Capsigum annuum*
	Tamarind	*Tamarindus indica*
Sugars	*Sugarcane*	*Saccharum officinarum*
	Palmyra	*Borassus flabellifer*
Fibres	*Cottan*	*Gossypium hirsutum*

4.3 Natural area of principal crops

Though the areas under different crops vary from year to year, the normal areas of principal crops as a assessed by the department of Economics and Statistics for this district are given below:

Cereals	*Rice*	*84,627 ha.*
	Varagu	*2841*
	Ragi	*1087*
	Cholam	*1076*
	Maize	*212*
	Cumbu	*68*
Pulses	*Red gram*	*2817*
	Black gram	*895*
	Horse gram	*529*
	Green gram	*115*
Oilseeds	*Ground nut*	*39474*
	Gingelly	*2447*
Condiments	*Chillies*	*360*
	Tamarind	*287*
Sugars	*Sugarcane*	*2253*
Fibres	*Cotton*	*263*

(Source: Season and Crop Report of Tailnadu for 1997-98-Fasli 1407-Department of Economics and Statistics)

4.4 Trends in production and Productivity

Though agriculture is the main source of sustenance fro a majority of the population, the scenario is not quite encouraging. Dryland farming which is predominant suffers badly due to frequent poor monsoons, affecting agricultural production.

Cereals have shown fluctuations both in area cultivated and production from 1980-81 to 1995-96 while the largest coverage was in 1985-86 spreading over 127,174 ha the highest out turn of 314, 560 tonnes was

achieved in 1993-94. The highest yeild of 3030 kg./ ha was achieved in 1994-95. The area production and yeild /ha. fell sharply in 1995-96.

While the largest area coverage, highest production and highest yeild/ ha of pulses were achieved in 1985 - 86, the area, production and yeild/ ha. dwindled and fluctuated in the sybsequent decade.

Oilseeds area was the highest in 1993-94, but the highest production and yeild /ha. were in 1992-93. (Table 9)

4.5 Consumption of fertilisers and pesticides

About 30,000 tonnes of chemical fertilisers and 58,000 packets of bio-fertilisers were consumed during 1995-96.

About 20 tonnes of dust formulations and 3610 litres of emulsifiable concentrates (liquid) formulations of pesticides were also consumed during that year.(Table 10 &11). While consumption of fertilisers and bio-fertilisers had registered a continuous upward trend, that of pesticides recorded wide fluctuations between 1980 and 1995.

4.6 Research and extension

At Vamban, a Pulses Research Station has been established by the Tamilnadu Agricultural University realising the key role played by this district in pulses production. Thanks to the efforts of this station, Soya bean cultivation is gaining popularity among the farmers.
At Kudumiyanmalai, a giant seed farm, a Farmer's Training Centre and an Agricultural School have been established.

HORTICULTURE

5. Horticulture

5.1 Fruits

An interesting feature in the farm sector is the development of orchards using dry farming techniques and minimum irrigation in the formation stage. Banana is the main fruit crop under irrigation. The major fruit crops are,

Banana	*Musa sp*
Mango	*Mangifera indica*
Jack	*Artocarpus heterophyllus*
Guava	*Psidium guajava*
Acid Lime	*Citrus aurantifolia*

Jack, guava and acid lime are raised only on a very limited scale. Except for banana, the rest are raised on the red or lateritic soil belts.

During 1995-96, an estimated quantity of 132,000 tonnes of fruits was produced.

5.2 Vegetables

Brinjal (Solanum melongena) and ladies finger (Abelmoschus esculentus) are the two major vegetables cultivated here. During 1995-96, about 2,900 tonnes of vegetables were produced from 160ha.

5.3 Plantation crops-Cashew

A noteworthy feature of this district is the cultivation of cashew as a rainfed crop over extensive areas in the lateritic belt. However, no cashew processing unit has been established locally. The nuts are taken to

numerous processing units that have sprung around Panrutti in Cuddalore district. As per 1995-96 assessment, 25,765 ha. were under cashew with an out turn of 8500 tonnes of nuts. (Table 12)

5.4. Soil and water conservation measures

Table 13 summarises the various soil and water conservation measures implemented here upto 1995-96 in various panchayat union. The major works carried out are,

Construction of percolation ponds	131nos.
Construction of check/stop dams	793 nos.
Soil and water conservation measures in cropping areas	29,537 ha.

FOREST RESOURCES

6. Forest resources

6.1 Historical background

Major portion of the forests of this district was the personal preserve of the kings of Pudukottai state. Large forest areas were preserved as the hunting grounds for the rulers, their families and friends. With the merger of the princely state with Indian Union,'in 1948, the control of the forests were transferred initially to the Revenue Department in 1948 and subsequently to the Forests Department in 1950.

6.2 Extent

Considerable variations are noticed in the area of forests reported by different sources at varying time. It is high time that the Departments concerned reconcile the figures across the table and arive at an accepted figure. The differences are indicated below:

Source	Year	Area quoted (Ha)
Department of Economics & statistics (Season & crop report 1997-98)	1997-98	24.103
Forest Department 1995-96	1995-96	23713
Forest Department	1999	18469
Forest Department (Working Plan for Thiruchirapalli Forest Division by Dr.Aruna Basu Sarcar)	1999	21165

The figures of 23713 ha as quoted by the Forest Department for 1995-96 indicate that reserved forests and reserved lands constitute 5.09% of the geographical area, whcih is far below the state average of 17.49%. (Table 14)

According to the Working Plan of Dr. Aruna Basu Sarcar, most of the reserved forests and reserved lands has been leased to the Tamil Nadu Forest Plantation Corporation Ltd., (TAFCORN) for raising plantations. An extent of 17842.42 ha of reserved forests and 436.92 ha of reserved lands have been leased out to TAFCON with only 301.89 ha of reserved forests and 2583.81 ha of reserved lands under the direct control of the Forest Department.

6.3 Flora

Much of the natural forests has been converted into plantations by TAFCORN. Only isolated patches of natural forests like Narthamalai R.F are being managed by the Forest Department and these forests support the following forest types:

Type 7C - 1 ------------- Tropical dry evergreen forests and

Type 6 A - C2 ---------- Southern Carnatic umbrella thorn forests.

6.3.2 Tropical dry evergreen forests

These forests are unique in nature and the floristic composition are as follows.

Characteristic species

- *Manilkara hexandra*
- *Mimusops elengi*
- *Albizia amara*
- *Memecylon umbellatum*
- *Diospyros ferrea syn maba buxifolia*

Top Canopy

- *Mimusops elengi*
- *Diospyros ebenum (Occasional)*
- *Strychnos nux vomia (Occasional)*
- *Strychnos potatorum (Occasional)*
- *Diospyros chloroxylon (Occasional)*
- *Drypetes sepiarea (rare)*
- *Syzygium cumini*
- *Canthirum decoccum (frequent)*
- *ziziphus glaberrima (frequent)*
- *Acacia leucophloea (frequent)*
- *Catunaregam spinosa (frequent)*
- *Buchanania lanzan (Occasional)*
- *Sapinda emarginatus (Occasional)*
- *Albizia amara*
- *Albizia lebbek*
- *Tamarindus indica*
- *Azadirachta indica*
- *Borassus flabellifer*

Under wood

- *Carissa carandas (abundant)*
- *Flacourtia indica (locally abundant)*
- *Diospyros ferrea (frequent)*
- *Grewia sp (abundant)*
- *Gymnosporia spp (frequent)*
- *Ixora arborea (frequent)*
- *Tarenna ascatica (frequent)*
- *Memecylon umbellatum*
- *Garcinia spicata*

Shrubs

- *Strobilanthus*
- *Dodonaea viscosa (abundant)*
- *Glycosmis pentaphylla*
- *Ochna squarrosa*
- *Gmelina asiatica*

Herbs

- *Hemidesmus indicus*

6.3.3 Southern Carnatic umbrella thorn forests

This is an economically inportant forest type supporting many valuable fuelwood species

Top canopy	Acacia planifrons
	Albizia amara
	Choloroxylon swietenia
	Canthium dicoccum
	Gyrocarpus jacquinu
	Givotia rottleriforms
	Sapindus trifoliatus
Under growth	Acacia latronum
	Dichrostachys cinerea
	Atalantia monophylla
	Hemicyclia sepiaria
Shrubs	Randia dumetorum
	Carissa spinarum
	Zizyphus spp
	Acalypha fruticosa
	Barleria sp
	Soleannum toroum
Climbers	Pterolobium hexapetalum; Acacia pennata

6.4 Fauna

Eventhough forests of this district were the game resources of the former rulers and supported a variety of fauna, degradation have reduced the wildlife wealth. The animals commonly found are catalogued below:

Mammals	Bonnet macaque - Macaca radiata
	Jungle cat - Felis chaus
	Jackal - Canis aureus
	Small Indian civet - Viverricula indica
	Mongoose - Herpestes edwardsi
	Black naped hare - Lepus nigrieollis
Reptiles	Green whip snake - Ahaetulla nasutus
	Cobra - Naja naja
	Indian Krait - Bungarus caeruleus
	Russel's viper - Vipera russelli
Aves	Peafowl - Pavo sp
	Black drongo Dicrurus adsimitis
	Jungle and house crows
	Egrets
	Patridges

Around Viralimalai Murugan temple, Peafowls are seen in large numbers in tankbed plantations, private fields and atop trees. They breed and roam about freely because of the protection given to them by the forest Department and local population

6.5 Man made forests

The entire district abounds in cashew and Eucalyptus tereticornis plantations and the Arimalam series of Eucalyptus plantations is justly famous. TAFCORN has converted degraded natural forests into extensive plantations of cashew and Eucalyptus besides casuarina on a limited scale.

6.6 Social forestry

Under the auspices of SIDA Assisted Social Forestry Project, plantations have been raised in community lands like tank beds, poromboke lands, canal banks and roadsides. Upto the end of 1993-94, clock plantations and strip plantations have been raised as detailed below:

Block plantings	Tankbed plantations	13417 Ha
	Poramboke plains	703 Ha
	Fodder plantations	59 Ha
Strip Plantings	Avenue plantations	312 Ha
	River and canal bank plantations	125 Ha
	Railway line plantings	42 Ha
	Tank bund plantings	8 Ha

6.7 Private plantations

Private entreprenuers too have raised cashew Eucalyptus and casuarina plantations on a large scale under rainfed conditions. According to Season and Crop Report for 1997-98 the extents are, (Table 15)

Cashew	12126
Eucalyptus	2779
Casuarina	344

6.7.1 Trend in Percapita forest area

The per capita forest area has shown a declining trend from 0.051 hectares in 1951 to 0.016 hectares in 1996 due to a steady increase in population. The details are given in Table 16.

6.8 Ecological farm

An ecological farm over an extent of 30ha was established in Narthamalai R.F in 1987-88. The area was fenced and in 15 ha. the manual regeneration was assisted to reassert itself to achieve the original vegitation. In the other 5ha, whcih was barren, a variety of tree species was planted, assisgning one small block to each species. (Table17)

6.8.1 wild life

There has been no serious effort by the concerned authorities to launch any specific wild life conservation programmes because of scare occurrence of wild fauna. (Table 18)

6.9 Details of villages abutting forest area

The villages located in the taluks of Thirumayam, kulathur and Pudukottai abut forest areas in the district. Out of these Thirumayam has number of villages abutting forest area. The details regarding the villages abutting forest area and their population are given in Table 19.

6.10 Tribal Villages

There is no designated tribal village in the district. (Table 20)

6.11 Forest areas diverted for non-forestry purposes

No forest area has been diverted for non-forestry purposes after the advent of the Forest Conservation Act of 1980. (Table 21)

6.12 Rare and threatened species

Rhyncosia velutina and santapura madurensis are the two plant species which have become vulnerable and endangered, respectively. (Table 22)

7.13 Data on out turn of forest products was made available. However cashew and Eucalyptus are the two major forest products in the district (Table 23)

MINERAL RESOURCES

7. Mineral Resources

The district has no significant mineral deposits. Stone quarries exit in Pudukkottai , Tirumayam and Kulathur Taluks: Multi-coloured stones, which are quarried and exported to as raw stones, are found in Kulattur Taluk in Narthamalai area.

There are 316 quarries in the district. Of these, 146 are leased out to private parties while 4 are leased to cooperatives.

Clay deposits occur in Gandharvakottai and part of Pudukkottai Taluks while red ochre and yellow ochre are reported in Tirumayam Taluk, though not in significant quantities. Terracotta clay is available in Mazhiyur village in Alangudi Taluk and is currently used for production of toys, grain storage bin and other clay articles.

Fire clay is available in Gandharvakottai Taluk.

Small quantities of quartz and limestone are reported in Vellakkalpatti and Meppusakudi while kankar is reported in Adhanakottai area.

The low mineral base of the district is evident in the mineral production profile, which comprises 12000 tonnes of rough stones and 300 tonnes of multi-coloured stones.

The recoverable mineral resources available in the district is granite of Kashmir white variety. However this has not been recovered so far here. (Refer Table 24).

WATER RESOURCES

8. WATER RESOURCES

8.1. SURFACE WATER

The district is one of the good rainfall regions with an average monthly rainfall of 118.0 mm. This has ensured a high percent of water table in the district as indicated by the following data for 1995-96.

Normal monthly rainfall	77.13
Normal annual rainfall	925.6
Actual annual ainfall (95-96)	485.9
Water table - low level	23.90m
Water table - high level	1.20 m

In Pudukottai district, Agniyar basin is the main source of surface water. Agniyar river basin consists of three sub basins, namely Agniyar , Ambuliyar and south vellar. There are seven tributaries in ths basin. Agniyar is having three tributaries Viz Nariar I, Nariyar II and Maharajasamudram. The river Ambuliyar is having two tributaries, Viz Nerunjikudiar and Gundar. There are three gauging stations in Agniyar river basin maintained by PWD. (Table 25)

An important point to be noted in this basin is that there are no reservoirs across any of the rivers of this basin, the main reason being none of the rivers has copious flow. There is no direct ayacut fed by the rivers of this basin. There are about 3975 tanks in this basin by which 76350 ha are being irrigated. Out of the above, 346 are system and 3629 are non-system tanks. The approximate storage capacity of these tanks is 560 MCM.

8.1.1 Grand Anicut Canal (G.A.Canal)

Even though there are no reservoirs in this basin it is some what nullified by the supplementation of Cauvery water to part of the command area through G.A.Canal. It is supplementing the ayacut under 16 anicuts located in Agniyar, Ambuliyar and their trubutaries. There are 74 tanks in Pudukottai District supplemeted by G.A canal irrigating 5997 ha. The ayacut is located in Alangudi, Aranthangi and Avudayarkoil taluks of Pudukottai district.

River	Origin	Ayacut
Agniyar sub basin		
A. Agniyar	Kulathur Tank , PDK	17304
B. Maharajasamudram	Vallan, Tanjore	6769
Vellar Sub basin		
A.Lower vellar	Tiruchi	24699
Ambuliar sub basin		
A.Upper Ambuliar	Alangudi T.K , RDK	2676
Grand Anicut Canal	Couvery	5997

Agniyar, Ammliyar, South Vellar and GA Canar are the flowing water , sources ofPudukkottai district. The total length of these streams in the district is 241.0 km and cover a basinarea of abont 47,000 hectares.

The basinwise status of ground water availability in terms of average annual rainfall, gross recharge of the basin, net water utilised and balance water available for exploration is presented in Table 26.

8.2 Dams and reservoirs

No dams or reservoir is constructed in Pudukkottai district. (Table 27)

8.3 Irrigation of different Sources

Tanks are the main source of irrigation in the district. All the tanks are rainfed and the available water area for tanks is 60454 hectares. (1995-96). The total number of tanks available in the district in 1995-96 was 5451. The gross area irrigated by the tanks is 60613 hectares. Wells are the second major source of irrigation, irrigating 16511 hectares. Canal irrigation is available to raise crops in 9182 hectares. The blackwise details are given in Table 28 & 29.

8.4 Incidence of drought/Flood & Cyclone

No drought, flood or cyclone has been reported between 1985 and 1996. (Table 30)

FISHERIES RESOURSES

9. Fisheries Production

Pudukkottai district has a total coastal length of 42 kms, serving 29 coastal villages and towns. The fish production has increased both inland and marine - over the period 1986-96. 4000 tonnes of inland fish and 48000 tonnes of marine fish were produced in the year 1995-96. Rougnly 4000 fishermen are actively engaged in this activity. Inland fishery, largely a seasonal activity, is concentrated in tanks and ponds in Alangudi , Thirumayam and Kulathur Taluks. The fish varieties caught are gilĺnet, ray fish, Prawn, belone, silver bellies, octopus and crab. The details in fish production is given in Table 31 & 32.

HERITAGE RESOURCES

10. Heritage Resource

Places of Religious Historical and Archaelogical Importanceincluding Places of Tourist Interest (Table 33 & 34)

10.1 Government Museum

The rare collections is the sections of Geology, Zoology, Painting, Anthropology, Epigraphy and Historical records are very interesting and informative. The beautiful bronze sculptures of various periods are really attractive pieces of this museum.

10.2 Sittannavasal

This ancient abode of Jains dating back to the 2nd century B.C. is about 16km. from Pudukkottai. It is the oldest uninhabited site in the District. The rock-cut cave temple with its beautiful frescoes and paintings in natural colours and stonebeds known as Eladipattam, a cave in which the Jain monks were said to have sought refuge in those days are the main attractions. There are a few sculptures of Jain Thirthankaras in the Ardhamandapam and the Inner shrine of the cave temple. The ceiling of the Ardhamandapam contains fresco paintings of the 7th Century A.D. Inscriptions of 9th-10th century A.D. are also found in the cave. The cave temple is said to have been excavated in the 7th Century A.D. by the Pallava king Mahendravarman. In the area around Sittannavasal, there are many historical burial sites consisting of kurangupatarai cairns, burial urns and cists.

10.3 Kudumiyanmalai

It is 20kms. from Pudukkottai. There are beautiful sculptures and a thousand pillar hall in the temple. There are as many as 120 inscriptions in the temple complex. The presiding diety is Sikhagiriswarar. The temple is noted for numerous inscriptions, remarkable among them is the one relating to a musical treatise of Mahendravarma Pallavan who experimented the Sapthaswara in a veena caled Parivardini with 8 strings. There is also a rock-cut temple called Melakkoil which was excavated furing the time of Mahendravarma Pallavan.

10.4 Kodumbalur

This place also known as Muvarkoil is 36 km. from Pudukkottai and 42 kms. from Trichy. It was formerly the seat of Irukkuvellers who were related to Cholas. Out ofthe three shrines of Muvarkoil, only two exist now. These temples were built by Budiviramakesan in the 10th Century A.D. The architecture of this temple is unique among the South Indian temples. The sculptures of Kalarimurthi, Gajasamaharamurthi, Ardhanari and Gangadarmurthi are interesting masterpieces of art. This place was noted for the production of metal vessels and plates. Nearby is the Muchukundeswarar temple of the early Chola period.

10.5 Viralimalai

This town lies northwest of Pudukkottai about 40 kms. Throughout the district and even outside, this place is well known for the Subramaniar temple and is said to exist before 15th century A.D. The principal idol is seated on the peacock with his consorts on either side. Viralimalai has been mentioned in the Tamil bookof hymns 'Thirupugazh'.

10.6 Narthamalai

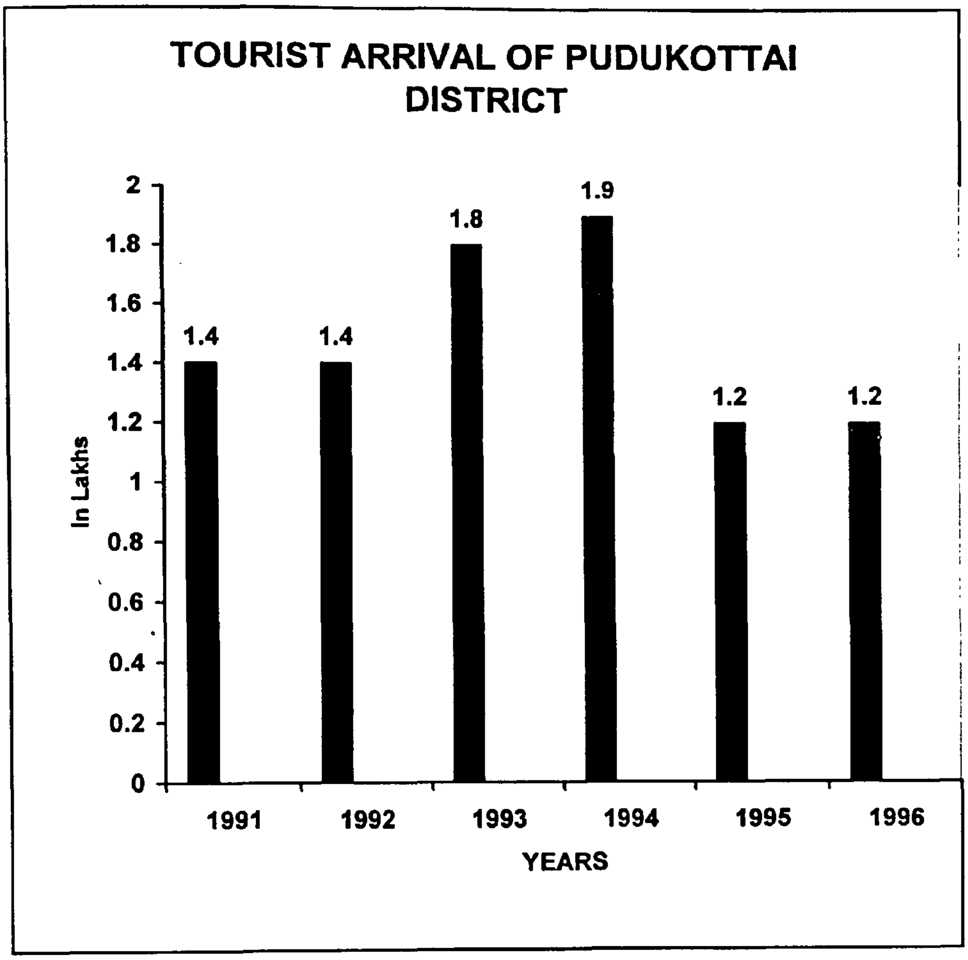
This is a place of historical importance and the headquarters of the Muthuraiya Chieftains. The earliest structural stone temple, circular in shape, built by the Muthuraiyar and the Vijayalaya Choleeswaram cave temple built by the Vijayalaya Chola, the first king of the later Cholas are located here. The prehistoric burial grounds and the Kadambarmalai temple of this place are also of tourist importance.

10.7 Tirumayam

It is one of the 108 Divyashetras sung in the Vaishnavite hymns, Divya prabhandam. It is also one of the 28 Vaishnava pilgrim centres. The fort, the Siva and Vishnu temples are the tourist attractions here. The famous Vaishnavite saint Tirumangai Alwar is supposed to have lived here before the 10th century. The ruins of an old fort exist here and it is said that the Poligar of Panchalankurichi was imprisoned in this fort befoire he was handed over to the British by the Tondaiman. The Sengirai forest near this palace is significant, for it is believed that this forest was the abode of the demoness Thadakai who was killed by Sri Rama. The fort played an important role in the history of Tondaiman rulers of Pudukkottai and the British. The erection of this fort in 1687 AD.is attributed to Sethupathy Vijayaraghunatha Tondaiman, the Sethupathy of Ramnad.

10.8 Tourist Arrivals

Information on tourist flow indicates that there has been a steady increase in number inthe district between 1990 and 1994. In the later period the flow declined. (1994-96) (Table 35).


TOURIST ARRIVAL OF PUDUKOTTAI DISTRICT
In Lakhs
2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
1.4
1.4
1.8
1.9
1.2
1.2
1991
1992
1993
1994
1995
1996
YEARS

ENERGY RESOURCES

11. Energy Resources

11.1 No power projects exist in the district. (Table 36)

11.2 Consumption of electricity

The main source of power supply to the grid in the district are Trichy (230 KVSS); Thanjavur (110KVSS); KARAIKUDI (66KVSS) and Manapparai (66KVSS). The distribution within the district is managed through 14 sub stations in different parts.

The total electricity connections as on 1995-96 are 2.4 lakhs. Domestic and Industrial power consumption together constitute 71.9% of the total electricity used in the district. The category wise consumption of electricity is given in Table 37.

11.3 Electrification of Vilages

The district Pudukkottai has achieved cent percent rural electrification even in the year 1996 and nearly 39538 pumpsets were energised in1996. The details are given in Table 38.

11.4 Non-convertinal & Renewable Energysources Utilisation.

In respect of non-convertional & renevable energy sources, there are 2 units Solar Voltic Pumps of 2 HP capacity and 152 units of Biogas plants. As many as 8000 inproved chullahs are constructed in the district. (Table 39)

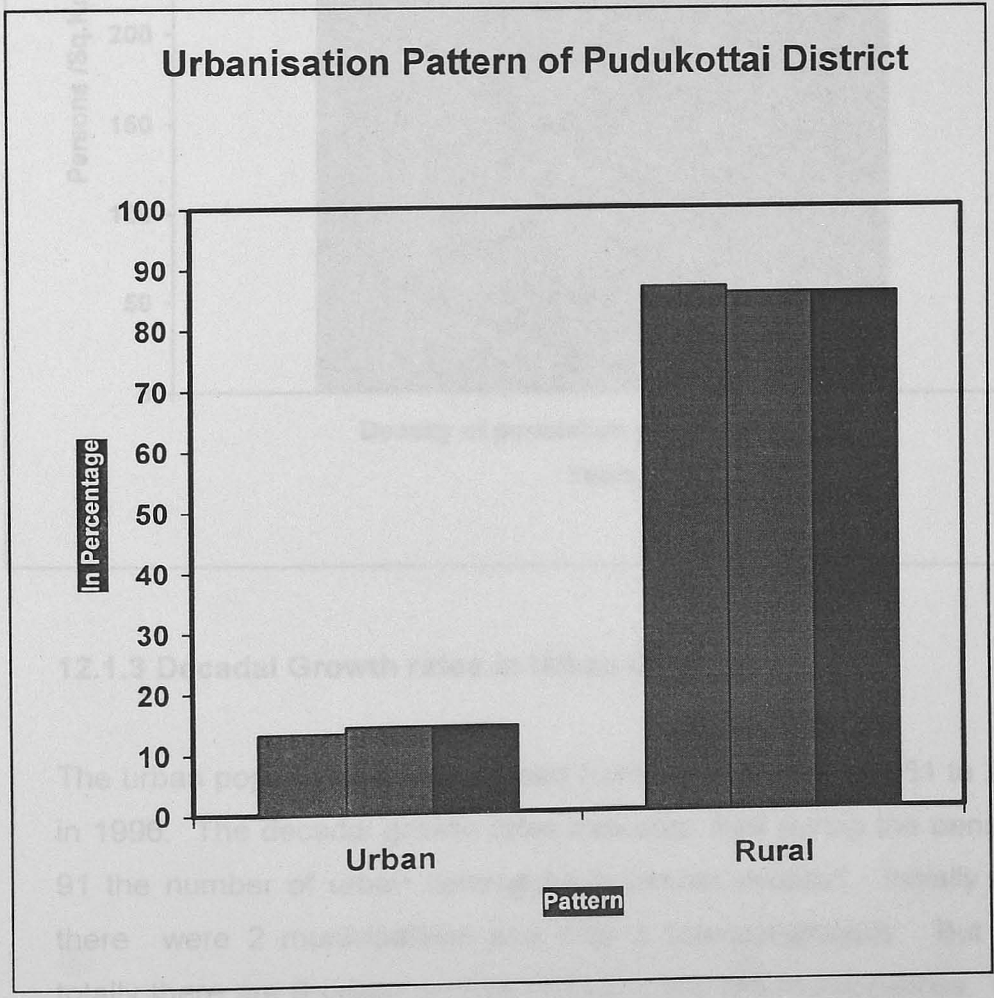
INFRASTRUCTURE

12. INFRASTRUCTURE

12.1 Ubanisation

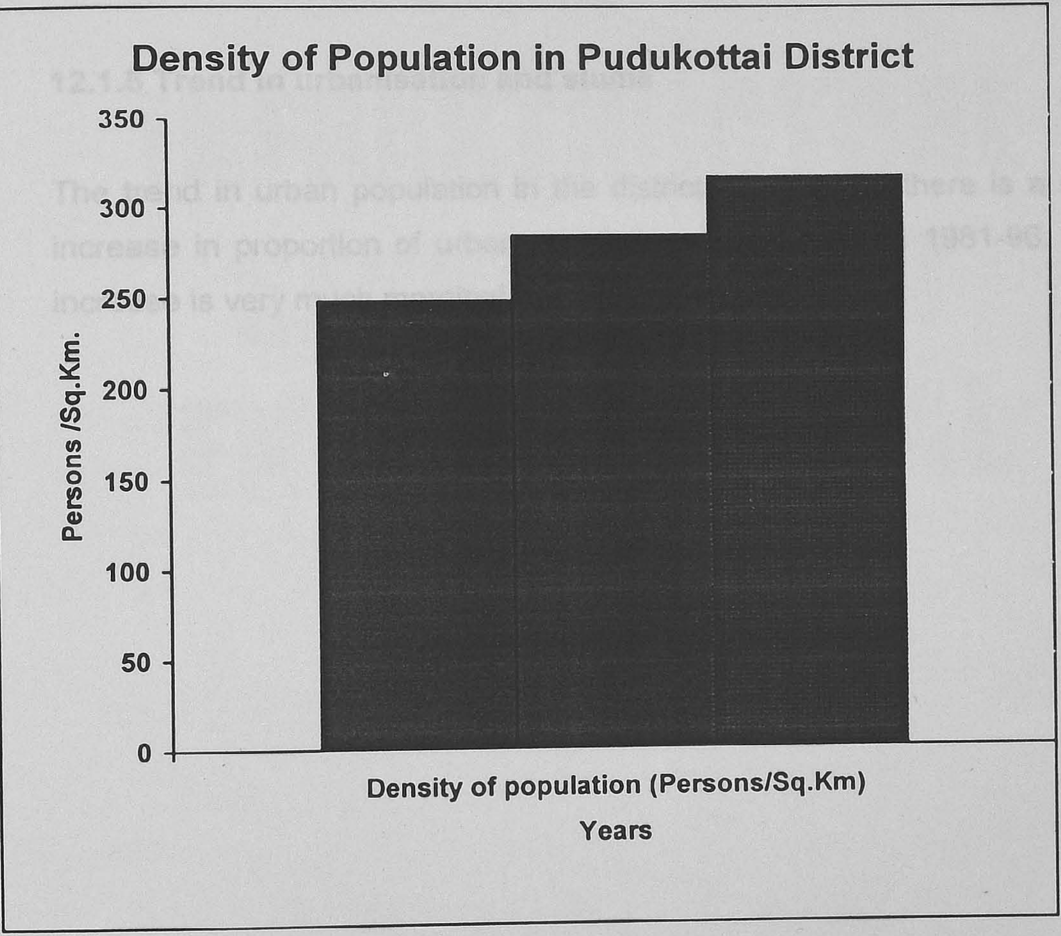
12.1.1 Urbanisation Pattern

The urban profile of the district unfolds with two municipalities and 7 town panchayats with an estimated urban population spread of 2.1 lakhs. The increase in urban population in the last two decades of 1981-96 is over 58,000. The urban population in the dist5ict accounts for 14.3% of the total population. (1996). The district urbanisation pattern is given in Table 40.



12.1.2. Density of Population

The overall density of the district population has registered an increase from 248 persons/sq,km to 317 persons/sq.km. The density of population was 3000 persons per sq.km in urban sites during 1996. (Table 41)



12.1.3 Decadal Growth rates in Urban Centres

The urban population has increased from mere 14000 in 1951 to 2.1.lakhs in 1996. The decadal growth rates indicates thjat during the period 1981-91 the number of urban centres have almost doubled. Initially in 1951, there were 2 municipalities and only 3 townpanchayats. But in 1996 totally there are 9 urban centres including the two municipalities. The next decade 1981-91 has recorded an increase in urban population at the rate of 43.38%.(Table 42 & 43)

12.1.4 Urban Slum Population

The recorded slum population in the district was arround 30,000 during 1991. No relevant data is available for comparitive analysis of slum population over the period 1981-96. (Table 44)

12.1.5 Trend in urbanisation and slums

The trend in urban population in the district reveals that there is a slight increase in proportion of urban population over the years 1981-96. The increase is very much marginal at 1.1%.(Table 45)

INFRASTRUCTURE SERVICES AND ENVIRONMENTAL STATUS

13. INFRASTRUCTURE SERVICES AND ENVIRONMENTAL STATUS

13.1 Urban Services

13.1.1 water supply

Ground water is the major source of supply in the district and the designed capacity is 126.95 lakh litres. The average per capita water supply is 60 lpcd with a per capita water availability of 67 lpcd at municipalities. (Table 46)

Over 85% of the town population is covered by protected drinking water supply. The estimated sewage generation is 91.8 lakh liters. There is no underground sewage system. There is also no treatment plant in the district and therefore there is no organised disposal of sewage. (Table 47)

13.1.2 Municipal Solid Waste Generation

The total daily solid waste in urban areas of Pudukkottai district is 45.5 tonnes with a collection efficiency of 89%. Of these 25 tonnes are generated in Pudukkottai town itself. About 250 workers are engaged in solid waste management throughout the district. The details are given in Table 48.

13.1.3 Municipal Solid Waste Composition

Pudukkottai municipality alone has furnished the details on solid waste composition. The primary component of the waste is compostable matter and accounts for 85% of the total waste. (Table 49)

13.1.4 Coverage of Problem Vilages

Of the total 3289 settlements in the district, 2272 are fully covered under protected water supply and 1017 settlements are partially covered with protected with supply. (Table 50)

13.1.5 Occupied Housing Units

The total number of occupied housing units has, increased from 1996-97 both rural and urban areas. There has been an increase in the number of households accessing piped water supply connection and toilet facilities in both rural and urban areas. However, larger proportion of households do not have any toilet installations. The details on occupied housing units are given in Table 51.

13.1.6 Reported cases of water borns diseases

Over a period of 10 years ie., between 1987-96, largely reported water borne diseases have been gastroentitis. Diarrhoea, and malaria. The reported incidence of death occured only due to diarrhoea. (Table 52)

13.1.7 Facilities under Indian system of Medicines

Under Indian medicines systems, hospital and bed facilities are available for sidha and homeopathy. There are 12 hospitals with 958 beds (1995-96) that provide allopathy treatment in Pudukkottai district. There are totally 314 registered practitioners in various form of medicines. (Table 53)

13.1.8 Population Below Poverty Line

96733 families are reported to be below poverty line in the district. Data for other years are not available. (Table 54)

13.2 Transportation

13.2.1 Development of Roads and Bridges

There is no national highway passing through the district. In respect of state highways, an additional length of 20km has been laid during the period 1981-96 bringing the a total length to 188 km. Other district roads have been laid during the period for an aproximate lengthof 700 km. There are 76 major bridges, 336 minor ones with as many as 4096 culverts in the district (1996) (Table 55)

13.2.2 Growth of Vehicle Population

The vehicle population in general has increased over eight times in the district. Four wheelers have registered a three fold increase in their population. Similarly, Two wheelers have recorded a manifold increase in numbers from 1472 to 19347 (1986-96). The details are provided in Table 56.

13.3 Industrial Development and Environmental Status

13.3.1 Number of Industries

There is not much industrial activity in this district. There are only 29 large and medium units operating in the district while as many as 3000 units are reportedly working in the small scale sector. A major facility available to industrial enterprises in the district is the developed plots and built-up sheds provided by SIPCOT and SIDCO respectively.

SIPCOT complex

The SIPCOT complex is situated 7 km. From Pudukottai on the Pudukottai - Trichy road in an extent of 412 acres. Of this area, around 51 acres are allotted to SIDCO Idustrial Estates where builtup sheds are made available to entrepreneurs.

SIDCO Estates

Built up sheds provided by SIDCO in its estates at Pudukottai and Madur. The major and medium units operating in the district are engaged in variety of activities ranging from food products to textiles to pressure valves and vessels. (Table 57)

Large/Medium Industrials units by activity	
Activity	Units
Cotton yarns	5
Chemicals	4
Boilers and pressure vessels	1
Valves and accessories	2
Plastics	2
Paper	1
Fasteners	1
Industrial fabric	1
Batteries	1
Alloys & steels	4
Magnetto starter	2
Nylon fishnet	1
Building equipments	1
Rice bran oil	2
Wheet products	1
Total	29

13.3.2 Emission Inventory Major Industries

Nil (Table 58)

13.3.3 Ambient Air quality Status

Nil (Table 59)

13.3.4 Air Pollution stressed area

Nil (Table 60)

13.3.5 Water quality

Data are not available for water quality of surface water. (Table 61)

13.3.6 Discharge of Industial effluents

There are no reported air pollution areas in Pudukkottai district. Data are not available for ambient air quality status. (Table 62)

13.3.7 Noise levels

Data on noise levels are not available (Table 63)

13.4 Environmental Status Of Coastal Eco-System

13.4.1 Industrial development and Discharge of Industrial Effluents.

There are no Industrial units in the district that discharge effluents. (Table 64)

13.4.2 Aqua culture activities

The acqua culture activities practised in Pudukkottai district have been of semi intensive type. There are 50 such units covering 231 hectares of area. The details are given in Table 65.

13.4.3 Wetland Habitats, their use and Problems

There is no weland habitat in Pudukkottai district . (Table 66)

13.4.4 Potential Hot Spots along the coast

The potential hot spot identified for the district is the seashore at Manalmelkudi. (Table 67.)

13.5 Environmental NGOs and Institutions

There are 16 NGOs rendering their services for creating environment awareness and campaigns. (Table 68)

13.5.1 Environment Education and Research Institutions

No such institutions is functioning in Pudukottai district. (Table 69)

SUMMARY OF OBSERVATIONS

14. Summary of Observations

The key observations of the environment profile of Pudukottai district are briefed below.

14.1 Demographic details

1. The district population has grown over 2.7 times during the period 1951-1991. As per 1991 census Kulathur Alangudi and Tirumayam taluks are the most populous taluks.,
2. The birth rate had significantly decreased from 1951 to 1991. Nearly half of the rate as compared to the birth rate in 1951.
3. As per 1991 census the district literacy level increased considerably than the previous decade.

14.2 Land and resources

1. The utilisation of land area in Pudukottai district is upto 66% only. About 29.4% land are not available for cultivation.
2. Across the blocks, the usage of chemical fertilizers is uniform. But the usage of bio-fertilizers has increased significantly.
3. About 22% of the soil is reported to be suffering from salinity / alkalinity.
4. The percolation ponds and check dams has been constructed in all blocks of the district under soil and water conservation programmes .

14.3 Forest and other resources

1. Forest occupy only 5.09% of the total land area, but remain intact without being diverted for non-forestry uses. The percapita availability of forest is diminishing.
2. An Ecological farm over an extent of 30ha was established in Narthamalai R.F in 1987-88.
3. TAFCORN has converted degraded natural forests into extensive plantations of cashew and Eucalyptus besides casuarina on a limited scale.

4.The main source of irrigation in the district are tanks and wells. On an average 60% of the total cropped area are irrigated by these sources.

5.The recoverable mineral resource available in the district is Kashmir white granite variety.

14.4 Urban infrastructure

1. The urban population has increased from 1.14 lakhs in (1971) to 2.12 lakhs in 1996
2. There has been a steady increase in slum population.
3. The trend in urbanisation continues to show an increase. However, in municipalities, the slum population has registered an increase over the period 1991-96.
4. Ground water is the major source of protected water supply in the district and the designed capacity is 126.9 lakh litres. The urban settlements suffer from inadequacy of underground sewerage and treatment.
5. Overall solid waste generated in the district adds upto 45.46 tonnes. Organised disposal by way of composting is lacking in many urban centers.
6. The vehicle population in general has increased in Pudukottai district during the period 1986 - 1996.

14.5 Industries growth and Environment

1. Industrial growth is not much in this district. One SIPCOT complex near Pudukottai is functioning in an extent of 412 acres and one SIDCO estate is functining in Madur .
2. Ambient air quality monitoring, water quality and emission monitoring of major industries are not taken up in the district so far.
3. Coastal waters do not face any serious problems from discharge of domestic or industrial waste at present.
4. There are 16 NGOs rendering their services for environmental issues.

Table No.	Title of the table
1.	Details of Administrative units in Pudukottai district
2.	Metrological information of Pudukottai district (Average if all Metrological stations and of period 1991-1996.
3.	Talukwise population of Pudukottai district
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5.	Literacy level among population in Pudukottai district
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7.	Soil types in Pudukottai district as on 1995-96.
8.	Problem soils in Pudukottai district.
9.	Trend in production and productivity of important crops in Pudukottai district.
10.	Consumption of fertilizers and pesticides in Pudukottai district as on 1995-96.
11.	Trend in consumption of fertilizers and pesticides in Pudukottai district.
12.	Horticultural and plantation crops in Pudukottai district as on 1995-96.
13.	Status of soil water consurvation programmes in Pudukottai district upto 1995-96.
14.	Forest area in Pudukottai district as on 1995-96.
15.	Man made forest plantation in Pudukottai district upto 1995-96.
16.	Percapita forest area of Pudukottai district
16.	Forest types in Pudukottai district.
17.	Conservation of biological resources in Pudukottai district as on 1995-96.
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19.	Details of villages abutting areas in Kancipuram district as on 1995-96.
20.	Tribal villages/ hamlets in Pudukottai district as on 1995-96.
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32.	Trends in fish seed production in Pudukottai district.
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35. Statement showing the tourist arrivals in Pudukottai district as on 1995-96.
36. Installed power projects above 3 MW capacity in Pudukottai district as on 1995-96.
37. Category wise consumption of electricity in Pudukottai district as on 1995-96.
38. Status of electrification of villages and energised pumps as in Pudukottai district as on 1995-96.
39. Non conventional & renewable energy sources utilisation in Pudukottai district as on 1995-96.
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42. Decadal growth rates in urban centres in Pudukottai district.
43. Decennial growth rate of population in Pudukottai district.
44. Urbanisation and slum population in Pudukottai district.
45. Trend in Urbanisation and slums in Pudukottai district.
46. Urban services in Pudukottai district as on 1995-96.
47. Domestic waste water generation and treatment in urban areas of Pudukottai district as on 1995-96.
48. Municipal solid waste generation and collection efficiency in urban areas of Pudukottai district 1995-96.
49. Composition of Municiapal solid waste in Pudukottai town of Pudukottai district.
50. Progress in the coverage of problem villages with supply of drinking water in Pudukottai district.
51. Occupied housing units by water supply system and toilet installation by rural and urban in Pudukottai district as on 1991.
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56. Growth of vehile population in Pudukottai district.
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58. Emission inventory from major industries in Pudukottai district.
59. Ambient air quality status of Pudukottai district.
60. Air pollution stressed areas in Pudukottai district as on 1995-96.
61. Water quality of Palar river waters in Pudukottai district.
62. Discharge of Industrial effluents in river basins/ other water bodies in Pudukottai district.
63. Noise levels in Pudukottai district.
64. Industrial sewage discharge in the coastal waters in Pudukottai district as on 1995-96.
65. Aquaculture activities in Pudukottai district as on 1995-96.
66. Wetland habitats, their use and problems in Pudukottai district as on 1995-96.
67. "Potential Hot Spots" along the east coast in Pudukottai district.
68. Environment NGOs in Pudukottai district.
69. Environmental education/ research institutions in Pudukottai district.

Table No. 1 Details of Administrative units in Pudukottai District as on 1995-96

NAME OF TALUK	NAME OF BLOCK	NO. OF VILLAGES	NO. OF VILLAGE PANCHAYATS	NAME OF TOWN PANCHAYATS	NAME OF MUNICIPALITIES
1.Pudukottai	1.Pudukottai	41	28		1.Pudukottai
2.Gandarvakottai	2.Gandarvakottai	35	36		
	3.Thirumayam	45	33		
3.Thirumayam	4.Arimalam	54	32	1.Arimalam	
	5.Ponnamaravathi	49	42	2.Ponnamaravathi	
4.Alangudi	6.Thiruvarangulam	73	48	3.Alangudi	
	7.Karambakkudi	50	39	4.Karambakkudi	
5.Aranthangi	8.Aranthangi	96	52	5.Keramangalam	2.Aranthangi
6.Kulathur	9.Viralimalai	54	45		
	10.Kunnandarkoil	49	37	6.Keeranur	
	11.Annavasal	59	43	7.Illuppur	
				8.Annavasal	
7.Avudayarkoil	12.Avudayarkoil	88	35		
	13.Manamelkudi	72	28		
7 Taluks	13 Blocks	765	498	8 Town Panchayats	2 Municipalities

Source: National Information Office, NIC - Net, Pudukottai District

Table 2: Meteorological Information of PUDUKOTTAI District (Average of All Meteorological Stations)

Climatic Factors		Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sep	Oct	Nov	Dec	Total	Average
Monthly Average rainfall (mm)		15	16.3	18.2	15.6	33.6	44.4	83.5	119.8	139	158	162.2	119	925.6	77.13
Average No. of rainy days (No.)	N	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na
Mean Temp.(C)		25.7	27.4	. 29.3	31.9	32.4	31.8	30.9	30.6	29.9	28.3	26.3	25.4	349.9	29.16
Mean Relative Humidity (%)		78.8	77.7	75.9	72.7	71.4	72.5	72	70.9	74.6	78.7	79.1	83	907.3	75.61
Mean Wind Velocity (kmph)		4.6	3.6	3.7	4.8	7.2	11.9	10.9	9.9	6.6	4.5	4.4	4.8	76,.9	6.41
Mean WindVilocity (M/Sec)		Na	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na
% Of Wind Occurance	N	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na
from 'Directions	NE	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na
	SE	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na
	S	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na
	SW	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na
	W	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na
	NW	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na
	Calm	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na

Source: Meteorological Department , Chennai

Table No. 3: Taluk - wise population of Pudukkottai District

NAME OF THE TALUK	'POPULATION AS PER CENSUS				
	1951	**1961**	**1971**	**1981**	**1991**
Pudukottai	-	-	164602	212718	176657
Gandarvakottai	-	-	-	-	71,700
Thirumayam	153453	162659	190363	208637	229108
Alangudi	176070	194479	161441	208096	235708
Aranthangi	-		118214	151446	173878
Kulathur	147155	169300	214904	254074	299480
Avudayarkoil	-		97827	121,842	140617
Total	**476678**	**526438**	**947351**	**1,156,813**	**1,327,148**

Source : Regional Director, RMDA., and Census Of India 1951to 1991.

Table No. 4. Trend in Birth / Death and Infand Mortality Rate in Pudukottai District

PARAMETER	CENSUS YEAR				
	1951	1961	1971	1981	1991
Birth Rate (Per Thousand)	42.6	35.3	28.6	24.4	21.7
Death Rate (Per Thousand)	20.2	16.8	13.6	9.2	7.3
Infant Mortality Rate (Per Thousand)	76.3	61.7	49.3	37.5	30.9

Source : Census Of India, DPH-Pudukottai District

**The district was formed during 1974*

Table No. 5. Literacy Level among population in Pudukottai District

Year	Population			Literate Population			% Of Literacy		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
1981	576335	580478	1156813	309143	138476	447619	53.64	23.86	38.69
1991	661782	665366	1327148	408700	250897	659597	61.76	49.71	57.63
1996	707685	711018	1481703	456640	310246	766886	64.53	43.63	51.76

Source : Census of India - 1981 & 1991
Assistant Director of Statistics - Pudukottai.

Table 6 : Land Utilisation Details for Pudukottai District : 1995-96

Classification	Name of the Blocks and Area in Hectare														
	Pudukottai	Gandharva kottai	Thirumayam	Arimalam	Ponnamara vathi	Thiruvaran gulam	Karamba kudi	Aranthangi	Viralimalai	Kunandar koil	Annavasal	Avudayar koil	Manamel kudi	Total	% to total
A. Total Geographical Area	28,406	32,027	28467	33810	32,650	44806	26937	41991	53101	37023	42170	39531	24805	465724	
B. 1. Forest Lands	1555	602	2,960	4,640	1,919	7,542	145	473	679	2040	533	625		23713	5.1
2. Non available for cultivation (a+b)	9,066	4,191	9113	12685	8730	7752	3689	11780	16907	13742	9992	18884	10353	136884	29.4
a) Barren & Uncultivable Land	6580	285	645	809	870	57	276		872	872	872	976	728	9748	2.1
b) Land put to non-agri uses	2486	3906	8468	11876	7860	7695	3413	11780	16035	12870	9120	17908	9625	127136	27.3
3.Other Uncultivated Land (a+b+c)	2579	4737	2050	3130	626	3392	4550	2492	3485	4924	2212	2048	570	35897	7.7
a) Permanent pastures and other															
grazing lands	369	390	136	427	101	423	50	155	458	979	973	657	69	5187	1.1
b) Misc. tree crops and groves not															
in the net area sown	2093	3149	816	875	16	2168	3972	1655	1485	2050	418	199	135	19031	4.1
c) Cultivable Waste Land	117	1200	1098	1828	509	801	528	682	1542	995	821	1192	366	11679	2.5
C. Fallow Lands (a+b)															
a) Current Fallow	10060	2953	4497	3502	7226	13199	6122	6457	22970	5556	14143	6371	4072	106769	22.9
b) Other Fallow Lands	355	4080	5805	3426	9054	505	938	1830	1339	1396	6384	1289	1619	38020	8.2
D. Cropped Area															
1) Net Area Sown	5191	15,462	4042	6427	5074	12416	11493	18959	7721	10265	8906	10314	8191	124461	26.7
2) Area Sown more than once	1700	509	-	-	-	260	263	170	3			73	558	3536	0.75
3) Total cropped area (1+2)	6,891	15,971	4042	6427	5074	12676	11756	19129	7724	10265	8906	10387	8749	127997	26.9

Note: Land use details to be collected for individual Block

Source: Assistant Director, Department of Statistics - Pudukottai.

Table 7: Soil Types in PUDUKOTTI District as on 1995-96

Sl.No	Type of Soil	Area Covered (Ha)	Percentage of Occurence
1	Red Loam	41410	8.89
2	Lateritic Soil	235598	50.59
3	Black Soil	-	-
4	Sandy Coastal Alluvium	-	-
5	Red Sandy Soil	-	-
6	Others (Mixed)	188716	40.52
	Total	465724	100.00

Note: Percentage of occurrance is with reference to total area under all soil types.

Source: Joint Director, Department of Agriculture-Pudukottai District.

Table 8: Problem Soils in PUDUKOTTI Distirct as on 1995-96

Type of Problem	Extent (Ha)	% to Total Lands (Excluding Forest lands and lands not available for cultivation)
(A) Salinity/Alkalinity	69450	22.79
(B) Water Logging & Marshy land	2150	0.71
(C) Prone to Floods	1150	0.38
(D) Prone to Soil Erosion Gullied,	-	-
Ravinous land	-	-
(E) Degraded non forest land	-	-
(F) Sands, desertic/coastal	2000	0.65
Total Area under Problem Soils	**74750**	**24.53**
Total Lands = Total Geographical area - (Forest Land + Land not available for cultivation = 304671.		

Note: Total geographical Area- (Forest Land + Land not available for cultivation (as in Table 6)
for the purpose of % calculation.

Table 9: Trend in production and productivity of important crops in PUDUKOTTAI District (Time Series data)

Year	Total Cereals				Total Pulses				Total Oil Seeds			
	Area/Ha	Production inTonnes	Productivity (Kg/Ha)	% change in Productivity	Area/Ha	Production in Tonnes	Productivity (Kg/Ha)	% change in Productivity	Area/Ha	Production in Tonnes	Productivity (Kg/Ha)	% Change in Productivity
1980-81	980.00	77000	785	-	6000	2000	333		32000	25000	781	
1985-86	1,27,174	3,12,460	2457	214 (+)	14,883	9,340	628	88.58 (+)	45,714	50,990	1115	42.78 (+)
1990-91	82,962	1,89,470	2284	7.04 (-)	20,178	7,540	376.00	40.13 (-)	54,380	48,960	900	19.29 (-)
1991-92	86725	2,27,110	2619	14.67 (+)	12,452	5,110	410	9.04 (+)	44,406	29,960	675	25.0 (-)
1992-93	1,05,851	3,05,980	2891	10.72 (+)	5,481	3,030	553	34.87 (+)	52,378	74,420	1421	105.18 (+)
1993-94	1,12,286	3,14,560	2801.00	3.11	5,693	2,240	393	29.0 (-)	55,431	59,220	1068	24.85 (-)
1994-95	97,241	2,94,650	3030	8.21 (+)	7,103	3,740	526	33.84 (+)	46,799	58470	1249	16.95 (+)
1995-96	59,602	78,290	1314	57.76 (-)	4,256	2,150	505.00	4.00 (-)	35,549	32,900	925	26.4 (-)

Source : Joint Director of Agriculture - Pudukottai.

Table 10: Consumption of fertilizers and pesticides in PUDUKOTTAI District as on 1995-96

Fertilizers and Pesticides	Consumption in Metric Tonnes													
	Pudukottai	Gandharva kottai	Thirumayam	Arimalam	Ponnamara vathi	Thiruvaran gulam	Karamba kudi	Aranthangi	Viralimalai	Kunandar koil	Annavasal	Avudayar koil	Manamel kudi	Total
A. Chemical Fertilizers														
1) Nitrogenous *(N)*	812	Na	833	896	782	1412	1063	1037	933	964	937	912	872	12327
2) Phosphatic *(P2O5)*	237	Na	262	266	210	324	307	308	234	262	277	284	206	3389
3) Pottasic *(K2O)*	298	Na	292	302	263	367	342	327	247	282	297	309	234	3791
Total *(N+P+K)*	**1347**	Na	**1387**	**1464**	**1255**	**2103**	**1712**	**1672**	**1414**	**1508**	**1511**	**1505**	**1312**	**19507**
B. Urea	1581	Na	1736	1728	1470	2302	1817	1910	1687	1624	1712	1786	1724	22600
C. Bio Fertilizers *(No. of Pockets/Kg)*	4620	Na	4230	4670	4270	5480	4630	4840	4335	4470	4630	4630	3960	58685
D. Pesticides														
1) Dust *(Kilos)*	1430	Na	1430	1520	1370	1960	1570	1730	1520	1680	1730	1470	1320	20000
2) Liquid *(Litres)*	315	Na	262	267	263	430	290	255	264	307	282	225	190	3610

Source : Joint Director of Agriculture - Pudukottai

Table 11: Trend in Consumption of Fertilizers and Pesticides in PUDUKOTTAI District

Year	All Chemical Fertilizers (NPK) (M.Tonnes)	Bio-Fertilzers (Pockets)	Pesticides		Percentage (Increase or Decrease)			
			Dust(kg)	Liquid (Lt.)	Chemical Fertilizers	Bio Fertilizers	Pesticides	
							Dust	Liquied
1980-81	11,185	920	160000	2142	-	-	-	-
1985-86	19,507	3080	231000	12091	74(+)	234.8(+)	44.3 (+)	464.4 (+)
1990-91	17,540	9694	144000	12797	9.0(-)	214.7(+)	37.6 (-)	5.8 (+)
1991-92	22,924	15104	181000	11257	30.7(+)	55.8(+)	25.6 (+)	12.0 (-)
1992-93	23,947	21061	101000	8989	4.5(+)	39.4(+)	44.1 (-)	20.1 (-)
1993-94	25,322	23289	155000	7283	5.7(+)	10.6(+)	53.5 (+)	18.9 (-)
1994-95	28,251	34110	48000	5241	11.6(+)	46.5(+)	69.0 (-)	28.0 (-)
1995-96	30,145	58685	20000	3610	6.7(+)	72(+)	58.3 (-)	31.1 (-)

Source : Joint Director of Agriculture - Pudukkottai

Table 12: Horticultural and Plantation Crops in PUDUKOTTAI District as on 1995-96

Name of the Crops	Area Coverage (Ha)	Annual Production	
		Product	Quantity(Tonnes)
A) Fruit Crops	4024	Mango, Banana, Guava,	
		Lime Jack and other fruits	1,32,096
B) Vegetable Crops	160	Tapioca, Tomoto, Brinjol	
		Ladies fingur, Sweet Potatos	
		Yam, Pumpkin and other	
		Vegetables	2887
C) Plantation Crops	25765	Cashew	8506

Source : Joint Director, Department of Agriculture/Horticulture -Pudukkottai

Tabel 13: Status of Soil and Water Conservation Programmes in Pudukkottai District upto 1995-96

Block	Construction of New Wells for Irrigation (No.)	Construction of Percolation ponds (No.)	Construction of Check Dams/Stop Dams (No.)	Cropping Area where soil conservatin works are undertaken (Ha.)
1.Pudukottai	22	22	243	1988
2.Gandarvakottai	32	25	119	1209
3.Thirumayam	28	9	100	1209
4.Arimalam	28	17	200	1209
5.Ponnamaravathi	-	9	1	4940
6.Thiruvarangulam	-	13	20	4940
7.Karambakkudi	-	12	27	4940
8.Aranthangi	-	7	25	4941
9.Viralimalai	-	5	15	4161
10.Kunnandarkoil	-	5	27	-
11.Annavasal	-	7	11	-
12.Avudayarkoil	-	-	5	-
13.Manamelkudi	-	-	-	-
Total	**110**	**131**	**793**	**29537**

Source: Agricultural Engineering Department, Pudukottai district.

Table 14: Forest area in PUDUKKOTTAI District as on 1995-1996

Classification	No.of Areas	Extent in Ha.	Percentage to total Forest Area
(A) Total Forest Area	Na.	18469	100
(B) Legal Classification			
1) Reserve Forests	Na.	17043	92.28
2) Reserve Lands	Na.	1426	7.72
3) Unclassed Forests	-	-	-
(C) Green Cover Classification			
1) Dense Forest	Na.	14111	14.23
2) Sparse Forest	Na.	11157	11.25
3) Plantations	Na.	34283	34.58
4) Scrub Forests	Na.	22333	22.52
5) Degraded Forests	Na.	5097	5.14
6) Grass Lands	Na.	69	0.07
7) Stoney and Rocky Sites			
including sheet rocks	Na.	12119	12.22
8) Encroachments	Na.	-	-
Total Land (Green Cover)	Na	99169	100

Note: Green cover Cover classification area for entire Trichy Forest Division.

Source : Forest working plan for Pudukkottai 1991.

Table 15 : Man made Forest Plantation in Pudukkottai District upto 1995-96

Sl.No.	Name of the species	Area in Ha.
	TAFCORN	
1	Eucalyptus, Cashew, Casuarina	18379.34
2	**SOCIAL FORESTRY**	
3	Tank bed plantation	13417
4	Purambokku plantation	703
5	Fodder plantation	59
	STRIP PLANTATION	
6	Avenue plantation	312 Km.
7	River & Canal bank plantation	125 km.
8	Railway line plantation	42 km.
9	Tank bund plantation	8 Km
	PRIVATE PLANTATION	
10	Cashew	12126
11	Eucalyptus	2729
12	Casuarina	344

Source: District Forest Office,Thiruchirapalli & Social forestry division Pudukottai.

Table :16 Percapita Forest Area in Pudukottai District as on 1995-96.

Year	Population	Forest Area (Ha.)	Percapita Forest Area (Ha.)
1951	476678	23713	0.051
1961	522438	23713	0.045
1971	947351	23713	0.025
1981	1156813	23713	0.021
1991	1327148	23713	0.018
1996	1481703	23713	0.016

Source: Additional Director of Statistics, Pudukkotai.

Table 17 : Conservation of Biological Resources in Pudukkottai District as on 1995-96

Name of Protected Area	Location		Legal Status of Land RF/ RL/UCF/Others	Year of Formation	Area in Ha.	% to total Forest Area in the District	Prominent Species Protected
	Taluk	Village					
IN SITU							
(A) Biosphere Reserve	-	-	-	-	-	-	-
(B) National Park	-	-	-	-	-	-	-
(C) Sanctuary including Bird Sanctuary	-	-	-	-	-	-	-
EX SITU							
(D) Zoological Park	-	-	-	-	-	-	-
(E) Botanical Garden	-	-	-	-	-	-	-
(F) Gene Park/Gene Pool	Kulathur	Narhamalai	R.F	1987.88	30ha		
Garden/Gene Bank*	-	-	-		-	-	-

Source : District Forest Office, Thiruchirapalli.

* Ecological farm

Table : 18 Wildlife Census in National Park/Sanctuary of THIRUVALLUR District as

			(Latest Census figure may be taken)				
Name of Animals					Numbers		
	-	-	-	NIL	-	-	-

Source : District Forest Office, Trichy.

Table 19 : Details of Villages abutting areas in Pudukottai District as on 1995-96

Taluk	No. of RF/RL/UCF	Area (Ha)	Name of the Revenue Village abutting Forest Area	Population as per 1991 Census	Livestock Population		
					Cattle (Ox, Cow, Buffaloes)	Sheep	Goats
Thirumayam	Ammankurichi	336.8	Ammankurichi				
	Maravamadurai	261.45	Maravamadurai				
	Provanamalai	31.12	Provanamalai				
	Varpattu	385.11	Varpattu	-------------- Data not available --------------			
	Palakurichi	117.39	Palakurichi				
	Sevilimedu	625.89	Sevilimedu				
Kulathur	Lingamalai	216.98	Lingamalai				
	Aladiperumuthukadu	63.76	Aladiperumuthukadu				
	Narthamalai	700.44	Narthamalai				
Pudukkottai	Pulavankadu	14.95	Pulavankadu				
	Mullur	43.89	Mullur				
	Maniyachi	12.52	Maniyachi				

Source: 1) Dist. Forest office, Thiruchirapalli

2) Census Dept.

Table 20 : Tribal Villages/Hamlets in Pudukkottai District as on 1995-96

Taluk	Name of the RF/ RL/UCF	Area (Ha)	Name of the Revenue Village	Name of the Tribal Hamlet	Population as per 1991 Census	Live Stock Population		
						Cattle (Ox, Cow, Buffaloes)	Sheep	Goat
NIL								

Source: District Forest Office, Thiruchirapalli

Table 21 : Forestry area diverted for non forestry purpose in Pudukottai under forest (Conservation) Act, 1980 upto 1995-96

Purpose	No.of Cases Cleared	Area Involved (Ha.)	No. of Cases in Process	Area involved (Ha.)
Irrigation Projects	-	-	-	-
Hydro electric Projects	-	-	-	-
Mining	-	-	-	-
Roads	-	NIL		-
Railways	-	-	-	-
Electric Transmission	-	-	-	-
Department of Space	-	-	-	-
Others	-	-	-	-
Total	-	-	-	-

Source: District Forest office, Thiruchirapalli.

Table 22 :Rare and Threatened Species of Flora and Fauna in Pudukottai District

Category	Name of the Species	Location where Occuring/Occured
Reptiles	NIL	NIL
Birds	NIL	NIL
Plants		
Vulnerable	Rhycosia velutina Wt (V)	Pudukkottai
Endangered	Santapaua madurensis Balakr. (E)	Narthamalai

Source: - IWPA 1972 (Anonymous 1991), Gosh (1994)

- Report on Endangered Plant Species Of Tamilnadu.

Table 23 :Trends in Production of Forest Produce in Pudukkottai District

Year	Timber		Sandalwood		Industrialwood		Fuelwood		Bamboo		All Minor Forest	
	Reserve Forest	Outside Reserve Forest	Reserve Forest	Outside Reserve Forest	Reserve Forest	Outside Reserve Forest	Reseve Forest	Outside Reserve Forest	Reserve Forest	Outside Reserve Forest	Produce Reserve Forest	Outside Reserve Forest
1981-82	-	-	-	-	-	-	-	-	-	-	-	-
1991-92	-	-	-	-	-	-	-	-	-	-	-	-
1992-93	Data Not Available											
1993-94	-	-	-	-	-	-	-	-	-	-	-	-
1994-95	-	-	-	-	-	-	-	-	-	-	-	-
1995-96	-	-	-	-	-	-	-	-	-	-	-	-
1996-97	-	-	-	-	-	-	-	-	-	-	-	-

Source: District Forest office, Thiruchirapalli.

Table 24 :Reserves of Important minerals in Pudukkottai District as on 1995-96

Mineral	Recoverable Resources (in Tonnes)					Mineral Concessions (as on 1.1.96)	
	Proved	Probable	Possible	Total	Actual Production	Value Rs.	Area (Ha.)
Granite (Kashmir White)	100000	-	-	100000	Nil	-	Thirukalambur 34.20.01

Source: Tamilnadu Minerals Ltd, (TAMIN) Chennai - 5

Tabel 25: Catchment Area of River Basins In PUDUKKOTTAI District

River Basin	Place of Origin	'Total		Within the District	
		Length	Area of the Basin (Hac)	Length	Area of the Basin (Hac)
Agniyar	Kulathur tank, Pudukottai Dt.	80	1875.18	80	1875.18
Ambuliyar	Manjanviduthi tank,	48	759.7	25.2	293.32
South vellar	Kumarikatti reserve forest, Trichy District	137	1931.51	48.6	745.76
G.A.Canal	Cauvery, Grand Anicut	140	50785	87.2	44789

Source : Executive Engineer- Public Works Department - Pudukottai.
Institute of Water Studies - Tharamani

Table 26 : Basin wis status of the Ground Water Availability in PUDUKKOTTAI District

Name of the River Basin	Geographical Area (Km)	Range of Average Annual Rainfall (mm)	Gross recharge of the basin (M)	Net Water Utilised annual (M)	Balance Water available for exploitation (M)	Net Water recoverable (M)
Agniyar	1875.18	705.57	585	523.45	61.55	
Ambuliyar	759.7	569.87	585	513.57	71.43	
South vellar	1931.51	634.56	585	558.74	26.26	
G.A.Canal	50745.43	652.93	585	499	86	

Source : Executive Engineer- Public Works Department - Pudukottai
Institute of Water Studies - Tharamani

Table 27 : Details of Dams and Reservoirs in Pudukkottai District as on 1995-96

Name of River	Name of Dam/ Reservoir	Year of Construction	Uses	Water Spread Area (Ha.)	Designed Capacity mcft.	Designed Extent of Ayacut (Ha.)			
						Dist 1	Dist 2	Dist 3	Total
----NIL----									

Source : Public Works Department, Pudukkottai District.

Table 28 : Available Water Spread Area in Pudukottai District as on 1995-96

Name of Taluk	Public Works Department				Panchayat Tanks		Total No. of Tanks	
	System Tank		Seasonal/Rainfed Tanks					
	No.	Water Area (Ha)	No.	Water Area (Ha)	No.	Water Area (Ha.)	No.	Water Area (Ha.)
Alangudi	Nil	Nil	525	5851	Nil	Nil	525	5851
Aranthangi	Nil	Nil	315	7352	Nil	Nil	315	7352
Avudaiyarkoil	Nil	Nil	459	19670	Nil	Nil	459	19670
Gandharvakottai	Nil	Nil	160	2340	Nil	Nil	160	2340
Kulathur	Nil	Nil	2127	11773	Nil	Nil	2127	11773
Pudukkottai	Nil	Nil	317	2537	Nil	Nil	317	2537
Thirumayam	Nil	Nil	1548	10931	Nil	Nil	1548	10931
Total	Nil	Nil	5451	60454	Nil	Nil	5451	60454

Source : Assistant Director of Statistics, Pudukkottai District.

Table 29: Irrigated area by different source in Pudukottai District as on 1995-96

Sl.No.	Blocks	Gross Area Irrigated					Total Cropped Area (Ha.)	% of irrigated area to cropped area
		Canals	Tanks	Wells	Other Sources	Total		
1	Alangudi	1139	6070	9,434	-	16,643	28,206	59.01
2	Aranthangi	6199	7551	1,534	-	15,284	23,539	64.93
3	Avudaiyarkoil	1647	19951	21	-	21,619	27,119	79.72
4	Gandharvakottai	195	2340	1,512	-	4,047	16,271	24.87
5	Kulathur	-	11773	2,017	-	13,790	30,681	44.95
6	Pudukkottai	-	2537	1,108	-	3,645	9,165	39.77
7	Thirumayam	2	10391	885	-	11,278	15,722	71.73
	Total	**9182**	**60613**	**16,511**	-	**86,306**	**150,703**	**57.27**

Source:Assistant Director of Statistics, Pudukottai District.

Table 30 : Incidence of Drought, Flood and Cyclone in Pudukottai District

Year	Taluks	Drought		Flood		Cyclone
		No. of affected Taluks	No. of affected Blocks	No.of affected Taluks	No.of affected Blocks	No.of affected Taluks
1985-86	7	Nil	Nil	Nil	Nil	Nil
1986-87	7	Nil	Nil	Nil	Nil	Nil
1987-88	7	Nil	Nil	Nil	Nil	Nil
1988-89	7	Nil	Nil	Nil	Nil	Nil
1989-90	7	Nil	Nil	Nil	Nil	Nil
1990-91	7	Nil	Nil	Nil	Nil	Nil
1991-92	7	Nil	Nil	Nil	Nil	Nil
1992-93	7	Nil	Nil	Nil	Nil	Nil
1993-94	7	Nil	Nil	Nil	Nil	Nil
1994-95	7	Nil	Nil	Nil	Nil	Nil
1995-96	7	Nil	Nil	Nil	Nil	Nil

Source: District Collectrate, Pudukottai

Table 31: Statement showing the Fisheries production in PUDUKKOTTAI District as on 1995-96

District	Length of Coastal Line (Km.)	Area (Ha)		Marine Fishing Villages (No.)	Fish Production (Qty=Tonnes; Value=Rs in lakhs)											
		Total inland Fresh water Spread Area	Estuaries & brakish Water Area		1990-91		1991-92		1992-93		1993-94		1994-95		1995-96	
					Qty	Value	Qty	Value	Qty	Value	Qty	Value	Qty	Value	Qty	Value
Pudukkottai																
INLAND	42	90570	Nil	29	4535	227	5504	358	3384	266	3730	392	3890	484	3888	544
MARINE					49886	3193	53919	3963	52583	5417	51340	7188	4745	7779	48871	9774

Source : Assistant Director, Department of Fisheries - Pudukkottai District.

Table 32: Trends in Fish and Fish Seed Production in PUDUKKOTTAI District

Year	Fish Production (Tonnes)		Seed Production
	Inland	Coastal	Thousands Standard Fry
1986	2600	26107	Nil
1991-92	5504	53913	Nil
1992-93	3384	52589	Nil
1993-94	3730	51340	Nil
1994-95	3890	47145	Nil
1995-96	3888	48871	Nil

Source : Assistant Director, Department of Fisheries - Pudukkottai District.

Table 33: List of Protected and Conserved Monuments by the ASI, State Archaeology department and Museums in Pudukkottai District as on 1995-96

Locality		Name of Monument maintained by ASI	Name of Monument maintained by Dept. of Archaeology	Museum maintaned by			
Taluk	village			Govt.	Universities	Local Bodies	Others
Pudukkottai	Pudukkottai	Palace, Govt. Museum.	Nil	Govt.	Nil	Nil	Nil
	Sithannavasal	Jain Cave temple	Nil	Govt.	Nil	Nil	Nil
	Kodumbalur	Moovar temple, Monument, Museum	Nil	Govt.	Nil	Nil	Nil
	Narthamalai	Ancient Monument	Nil	Govt.	Nil	Nil	Nil
	Kudumianmalai	Siva Temple	Nil	Govt.	Nil	Nil	Nil
	Thirukokarnam	Rock cut cave temple & Museum	Nil	Govt.	Nil	Nil	Nil
Thirumayam	Thirumayam	Fort, Vishnu & Siva Temples	Nil	Govt.	Nil	Nil	Nil

Source : Epigraphist Depatment of ASI. Archaleology, Museums - Pudukkottai District.

Table 34 Statement showing the places of Tourist Attractions in PUDUKKOTTAI District as on1995-96

Block	Name of Tourist Place	Town/Village in which located	Historical/Cultural/ Natural/Heritage area	Special significance of area	Best Season for visit
Pudukottai	Sri Kokameswarar Temple	Thirukokarnam	Historical	The rock-cut cave temple of Sri Kokameswarar	All
				Brahadambal temple ,Mahendravarma Pallava Period.	
	Government Museum	Pudukottai	Historical	Pallava period collections	All
	Kudimiyan malai	Kudimiyan malai	Historical	Pilgrim centre, Siva temple, famous for beautiful sculptures.	All
	Sittannavasal	Sittannavasal	Historical	Rock art Jain Cave temple, Pre-historic burial site.	All
	Narthamalai	Narthamalai	Historical	Ancient Monuments	All
	Kodumbalur	Kodumbalur	Historical	Moovar Temple, Monument and site, Museum.	All
Kulathur	Viralimalai	Viralimalai	Historical	Lord Subramania temple and Peacock sanctuary.	All
Avudaiyarkoil	Avudaiyarkoil	Avudaiyarkoil	Historical	Siva temple, Sculpture and noted for its zephyr (granite roof) wo	All
	Avur	Avur	Cultural	Pilgrim centre for christians	All
	Manamelkudi	Manamelkudi	Natural Heritage	Picnic spot, Beach	All
Thirumayam	Thirumayam	Thirumayam	Historical	Fort , Siva Vishnu Temples	All

Source : Department of Tourism, Pudukkottai District.

Table 35: Statement showing the Tourist Arrivals in PUDUKKOTTAI District as on 1995-96

Year	Tourists Visited		
	Domestic	foreign	Total
1990-91	140415	63	140478
1991-92	143411	54	143465
1992-93	188817	68	188885
1993-94	195268	87	195355
1994-95	125818	1025	126843
1995-96	119527	924	120451

Source : Tamilnadu Tourism Department, Government Museum, Pudukkottai.

Table 36: Installed Power Projects above 3 MW capacity in PUDUKKOTTAI District as on 1995-96

Category	'Number of Projects			'Installed Capacity(MW)			Actual Power Generation (MW)		
	1986	1991	1996	1986	1991	1996	1986	1991	1996
Thermal									
Hydel Power		------------	------------	------------	NIL	------------	------------	------------	
Atomic Power									
Total									

Source: Executive Engineer, Tamilnadu Electricity Board, Pudukottai.

Table37: Category Wise consumption of electricity in PUDUKKOTTAI District as on 1995-96

Category	Number of connections	Electricity Consumption (Kwh)	% to Total
Domestic	135540	17694015	39.31
Commercial	48410	5943140	13.20
Industrial	-	-	
Low Tension	1371	14701220	32.66
High Tension	2	420790	0.93
Agriculture	37621	3635000	8.08
Street Lights	9895	2603008	5.78
Others	1545	15450	0.03
Total	**234384**	**45012623**	**100.00**

Source: Executive Engineer, Tamilnadu Electricity Board (TNEB) Pudukkotai District.

Table 38: Status of Electrification of Villages and Energised Pumps as on PUDUKKOTTAI upto 1995-96

District	Total No. of Villages	Villages Electrified as on						Pumpset Energised as on		
		1986		1991		1996				
		Number	% to Total	Number	% to Total	Number	% to Total	1986	1991	1996
Pudukkottai	679	679	100	679	100	679	100	19528	27386	39538

Source: Executive Engineer, Tamilnadu Electricity Board (TNEB) Pudukkotai District.

Table 39: Non Conventional & Renewable Energy Sources Utilisation in Pudukkottai District as on 1995-96

Category	Number of Units	Installed Capacity (Kw)	Actual Generation (95-96) (Kw)	% to installed Capacity
I) Solar Energy				
i) Solar Water Heating System	Nil	Nil	Nil	Nil
ii) Domestic Solar Cooker	Nil	Nil	Nil	Nil
iii) Solar Photo Voltaic System:				
a) Lighting	Nil	Nil	Nil	Nil
b) Television	Nil	Nil	Nil	Nil
c) Power Plant	Nil	Nil	Nil	Nil
d)Solar Voltaic Pump (SVP)	2	2 HP	10000 Lit/day	100
II. Biogas	152	240.522	194.80	80.99
III. Wind Energy				
Wind Mills	Nil	Nil	Nil	Nil
IV. Ocean Energy	Nil	Nil	Nil	Nil
V. Improved Chullah	8000	-	-	-

Source : District Rural Development Agency (DRDA) & Tamilnadu Energy Development Agency, (TEDA) Chennai.

Table 40 : Urbanisation Pattern in Pudukkottai District

Urban Local Body	1981		1991		1996	
	Population	% to Total Population	Population	% to Total Population	Population	% to Total Population
Corporation	Nil	Nil	Nil	Nil	Nil	Nil
Municipalities						
Pudukottai	87,952	7.60	99,058	7.46	105126	7.09
Aranthangi	23,227	2.01	30,327	2.29	34653	2.34
Sub Total	**111,179**	**9.61**	**129,385**	**9.75**	**139779**	**9.43**
Alangudi	8,634	0.75	10,882	0.82	12432	0.84
Alagapuri	3,055	0.26	4,026	0.30	5945	0.40
Iluppur	8,679	0.75	10,795	0.81	12635	0.85
Kiranur	6,626	0.57	8,413	0.63	11145	0.75
Kadiapatti	4,028	0.35	4,494	0.34	4636	0.31
Ponnamaravati	11,467	0.99	11,417	0.86	12045	0.81
Pudukkottai (vp) **	-	-	11,091	0.84	13492	0.91
Sub Total	**42,489**	**3.67**	**61,118**	**4.61**	**72330**	**4.88**
Urban - Total (A+ B + C)	**153668**	**13.28**	**190503**	**14.35**	**212109**	**14.32**
	1003145	**86.72**	**1136645**	**85.65**	**1269594**	**85.68**
	1156813	**100.00**	**1327148**	**100.00**	**1481703**	**100.00**

** Notified as a town for the first time in 1991Census

Source: Census of India 1981 & 1991 / Commissioners, Municipalities and Execuitive Officers, Town Panchayats Offices - Pudukkottai District.

Table 41 : Density of Population in Urban & Rural Areas in PUDUKKOTTAI District

Year	Urban			Rural			Slum			Total		
	Population	Area	Density	Population	Area	Density	Population	Area	Density	Population	Area	Density
1981	153668	56.100	2739	1003145	4604.090	218	NA	NA	NA	1156813	4660.190	248
1991	190503	70.950	2685	1136645	4580.000	248	29,176	20.850	1399	1327148	4671.850	284
1996	212109	70.950	2990	1269594	4580.000	277	29,176	20.850	1399	1481703	4671.850	317

Note: 1.Population:- Number; 2. Area:- Sq.km.; 3. Density:- No./Sq.km.

Note: Slum Population has been included in the Urban population.

Source: Census of India 1981 & 1991 / Commissioners and Executive Officers, Town Panchayat Offices - Pudukkottai District

Table 42: Decadal Growth Rates in Urban Centres in PUDUKKOTTAI District

Sl. No	Name of the Corporation / Municipal Towns	Population as on						% increase over previous decade				
		1951	1961	1971	1981	1991	1996	1961	1971	1981	1991	1996
A	Corporation	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
B	**Municipalities**											
1	Pudukottai	44,527	50,488	66,384	87,952	99,058	105126	23.38	31.48	32.48	12.62	6.13
2	Aranthangi	8,219	10,258	16,350	23,227	30,327	34653	24.81	59.38	42.06	23.41	14.27
	Sub Total	**52,746**	**60,476**	**82,734**	**1,11,179**	**129,385**	**139779**	14.65	36.80	34.38	16.37	8.03
C	**Town Panchayats (Urban)**											
1	Alangudi	-	5,304	6,728	8,634	10,882	12432	-	**26.84**	**28.32**	**26.03**	**14.23**
2	Alagapuri	2,625	3,077	3,281	3,055	4,026	5945	17.22	6.63	6.88	31.78	47.66
3	Iluppur	-	-	7,222	8,679	10,795	12635	-	-	20.17	24.38	17.04
4	Kiranur *	-	-	-	6,626	8,413	11145	-	-	-	26.96	32.47
5	Kadiapatti	3,963	3,828	4,250	4,028	4,494	4636	3.40	11.02	5.22	11.56	3.16
6	Ponnamaravati	7,779	9,027	10,764	11,467	11,417	12045	16.04	11.02	6.53	0.43	5.50
7	Pudukkottai (vp) **	-	-	-	-	11,091	13492	-	-	-	-	21.64
	Sub Total	**14,367**	**21,236**	**32,245**	**42,489**	**61,118**	**72330**	**47.81**	**51.84**	**31.76**	**43.84**	**18.34**
	Total (A+ B + C)	**67,113**	**81,712**	**1,14,979**	**1,53,668**	**1,90,503**	**212109**	**21.75**	**40.71**	**33.64**	**23.97**	**11.34**

* *Notified as a town for the first time in 1981Census*

** *Notified as a town for the first time in 1991Census*

Source: Census of India 1981 & 1991 / Commissioners, Municipalities and Executive Officers, Town Panchayats Offices - Pudukkottai District.

Table 43: Decennial Growth Rate of Population in PUDUKKOTTAI District

Census Year	Population			Growth Rate (%)		
	Total	Rural	Urban	Total	Rural	Urban
1951	476678	409565	67113	-	-	-
1961	526438	444726	81712	10.44	8.58	21.75
1971	947351	832372	114979	79.95	87.17	40.71
1981	1156813	1003145	153668	22.11	20.52	33.65
1991	1327148	1136645	190503	14.72	13.31	23.97

Note: Composite Trichy District comprising Pudukkottai district.

Source: Census of India 1981 & 1991 / Commissioners and Executive Officers, Pudukkottai district

Table 44 : Urbanisation and slums in Pudukkottai District

Urban Local Body	1981			1991			1996		
	Town Population	Slum Population	% to Total Population	Population	Slum Population	% to Total Population	Population	Slum Population	% to Total Population
Whole District									
I. Urban Areas									
A. Corporations	Nil								
B.Municipalities									
1.Pudukottai	87,952	Na.	Na.	99,058	7562	7.63	105126	7562	7.19
2.Aranthangi	23,227	Na.	Na.	30,327	4144	13.66	34653	4144	11.96
Sub Total	**111,179**	Na.	Na.	**129,385**	**11706**	**9.05**	**139779**	11706	**8.37**
C Town Panchayats (Urban)									
1.Alangudi	8,634	Na.	Na.	10,882	3450	31.70	12432	3450	27.75
2.Alagapuri	3,055	Na.	Na.	4,026	985	24.47	5945	985	16.57
3.Iluppur	8,679	Na.	Na.	10,795	1245	11.53	12635	1245	9.85
4.Kiranur	6,626	Na.	Na.	8,413	1150	13.67	11145	1150	10.32
5.Kadiapatti	4,028	Na.	Na.	4,494	1100	24.48	4636	1100	23.73
6.Ponnamaravati	11,467	Na.	Na.	11,417	5860	51.33	12045	5860	48.65
7.Pudukkottai (vp) **	-	Na.	Na.	11,091	3680	33.18	13492	3680	27.28
Sub Total	**42,489**	Na.	Na.	**61,118**	17470	**28.58**	**72330**	17470	**24.15**
Urban - Total (A+ B + C)	**153668**	Na.	Na.	**190503**	29176	**15.32**	**212109**	29176	**13.76**

Source : Census of India 1981&1991/ Commissioners of Municipalities and Executive officers of Town Panchayat offices Pudukkottai District.

Table 45: Trend in Urbanisation and Slums in Pudukkottai District

Year	Total Population of District	Urban Population of District	Indentified slum Population District	% of Urban Population to Total population	% of Slum Population to Total population	% of Slum Population to urban population
1981	1156813	153668	Na.	13.28	-	-
1991	1327148	190503	29176	14.35	2.20	15.32
1996	1481703	212109	29176	14.32	1.97	13.76

Source : Census of India 1981&1991/ Commissioners of Municipalities and Executive officers of Town Panchayat offices - Pudukkottai District.

Table 46: Urban Services in Pudukottai District as on 1995-96

Urban Local Body	Designed capacity of Protected water supply		Per capita water supply LPCD	Town Population 1996	Percentage Population Covered	Percentage Population un-Covered	Total Estimated consumption Lakhs Litres	Estimated sewage generation
	Surface Water Lakhs Litres	Ground Water Lakhs Litres						
Whole District								
I. Urban Areas								
A. Corporations	Nil							
B.Municipalities								
1.Pudukottai	-	80.00	76	105126	88	12	85.00	58.50
2.Aranthangi	-	20.20	58	34653	100	-	22.20	16.50
Sub Total	-	**100.20**	**67**	**139779**	**94**	**6**	**107.20**	**75.00**
C Town Panchayats (Urban)								
1.Alangudi	-	4.00	32	12432	75	25	4.00	2.70
2.Alagapuri	-	3.00	50	5945	55	45	3.00	1.90
3.Iluppur	-	4.00	32	12635	60	40	4.00	2.60
4.Kiranur	-	3.50	31	11145	85	15	3.50	2.10
5.Kadiapatti	-	2.75	59	4636	80	20	2.75	1.20
6.Ponnamaravati	-	4.50	37	12045	87	13	4.50	3.90
7.Pudukkottai (vp) **	-	5.00	37	13492	90	10	5.00	2.40
Sub Total	-	**26.75**	40	72330	75	**25**	**26.75**	**16.80**
Urban - Total (A+ B + C)	-	**126.95**	**60**	**212109**	**85**	**15**	**133.95**	**91.80**

Source Census of India 1981&1991/ Commissioners of Municipalities and Executive officers of Town Panchayat offices - Pudukkottai District.

Table 47: Domestic Waste Water generation and treatment in urban areas of Pudukkottai District as on 1995-96.

Name of Urban Locak Body	Population	Estimated Sewage Generation (Lakh Lit)	Existence of Sewerage		Upto Primary	Upto Secondary	Upto Teritiary	No Treatment	Nature of disposal and quantity		
			Under Ground (C/P)	Open (C/P)					Water Body		Land
									River	Reservoir	
Whole District											
I. Urban Areas											
A. Corporations	NIL										
B.Municipalities											
1.Pudukottai	105126	58.50	-	Yes (P)	-	-	-	Yes	-	-	58.50
2.Aranthangi	34653	16.50	-	Yes (P)	-	-	-	Yes	-	-	16.50
Sub Total	**139779**	**75.00**	-	Yes (P)	-	-	-	Yes	-	-	**75.00**
C Town Panchayats (Urban)											
1.Alangudi	12432	2.70	-	Yes (P)	-	-	-	Yes	-	-	2.70
2.Alagapuri	5945	1.90	-	Yes (P)	-	-	-	Yes	-	-	1.90
3.Iluppur	12635	2.60	-	Yes (P)	-	-	-	Yes	-	-	2.60
4.Kiranur	11145	2.10	-	Yes (P)	-	-	-	Yes	-	-	2.10
5.Kadiapatti	4636	1.20	-	Yes (P)	-	-	-	Yes	-	-	1.20
6.Ponnamaravati	12045	3.90	-	Yes (P)	-	-	-	Yes	-	-	3.90
7.Pudukkottai (vp) **	13492	2.40	-	Yes (P)	-	-	-	Yes	-	-	2.40
Sub Total	**72330**	**16.80**	-	Yes (P)	-	-	-	Yes	-	-	**16.80**
Urban - Total (A+ B + C)	**212109**	**91.80**	-	Yes (P)	-	-	-	Yes	-	-	**91.80**

Source : Census of India 1981&1991/ Commissioners of Municipalities and Executive officers of Town Panchayat offices - Pudukkottai District.

Table 48: Municipal Solid Waste Generation and Collection Efficiency in Urban Areass of Pudukottai district 1995-96

Urban Local Body	Population	Solid Waste/day (Tonnes)			Workers for solid Waste manafement				If yes annual Production
		Generation	Collection	Collection Efficiency %	Total No.	No./1000 Population	Availability Of Compost Yard	Recycling as Manure Yes/No	
Whole District									
I. Urban Areas									
A. Corporations									
B.Municipalities									
1.Pudukottai	105126	25.43	22.5	88.48	175	1.70	1	Yes	10
2.Aranthangi	34653	6.00	5.75	95.83	56	1.62	-	No	
Sub Total	**139779**	**31.43**	**28.25**	**89.88**	**231**	**1.65**	1		10
C Town Panchayats (Urban)									
1.Alangudi	12432	2.33	2.20	94.42	4	0.3	No	-	-
2.Alagapuri	5945	1.75	1.50	85.71	3	0.6	No	-	-
3.Iluppur	12635	2.50	2.30	92.00	3	0.3	No	-	-
4.Kiranur	11145	2.45	2.20	89.80	2	0.2	No	-	-
5.Kadiapatti	4636	1.20	1.00	83.33	2	0.5	No	-	-
6.Ponnamaravati	12045	1.30	1.10	84.62	3	0.3	No	-	-
7.Pudukkottai (vp) **	13492	2.50	2.00	80.00	4	0.3	No	-	-
Sub Total	**72330**	**14.03**	**12.30**	**87.67**	**21**	**0.3**	No	-	-
Urban - Total (A+ B + C)	**212109**	**45.46**	**40.55**	**89.20**	**252**	**1.2.**	No	-	-

Source : Census of India 1981&1991/ Commissioners of Municipalities and Executive officers of Town Panchayat offices - Pudukkottai District.

Table 49: Composition of Minicipal Solid Waste in Pudukkottai Town of PUDUKKOTTAI District

Composition	% (On Wet Basis)
Compostable Matter	85.00
Rags	1.00
Wooden Matter	2.00
Rubber and Leather	2.00
Plastics	2.00
Metal	1.00
Glasses	1.00
Bones	1.00
Bricks and Stones	3.00
Ash and Fine earth	2.00
Total	**100.00**

Source : Commissioner , Pudukkottai Municipality - Pudukkottai District.

Table 50: Progress in the Coverage of Problem Villages with Supply of Drinking Water in PUDUKKOTTAI District

District	Year Up to	Total Settlements	Problem villages covered		
			Uncovered	Partly	Fully
Pudukkottai	01.04.96	3289	62	1577	1650
	01.04.97	3289	Nil	1477	1812
	01.04.98	3289	Nil	1262	2027
	01.04.99	3289	Nil	1017	2272

Source : TWAD Board, Chennai

Table No 51:Occupied housing units by water supply system and toilet installation by Rural and Urban in Pudukkottai district.

Year	Total Occupied Housing Unit	Water Supply System With Piped Water			Toilet Installaltion	
		Total	Inside	Outside	With Toilet of any type	Without Toilet of any type
1991						
Urban	35375	10,215	6030	4185	20790	14585
Rural	224305	2955	940	2015	11060	213245
Total	259680	13170	6,970	6200	31850	227830
1996						
Urban	50906	19343	11199	8144	26980	23926
Rural	317398	34738	15869	18869	37739	279656
Total	368304	54081	27068	27013	64719	303585

Source: Census of India 1991.

Table 52 : Trend in Reported Cases of Water borne Diseases in Pudukkottai District

Year	Reported Cases						Deaths					
	Gastroenteritis	Diarrhoea	Cholera	Typhoid	Jaundice	Malaria	Gastroenteritis	Diarrhoea	Cholera	Typhoid	Jaundice	Malaria
1987-88	Na	68	3	Nil	Nil	68	Na	7	Nil	Nil	Nil	Nil
1988-89	Na	101	3	Nil	4	140	Na	8	Nil	Nil	Nil	Nil
1989-90	Na	111	4	Nil	4	167	Na	6	Nil	Nil	Nil	Nil
1990-91	Na	9	Nil	Nil	12	171	Na	2	Nil	Nil	Nil	Nil
1991-92	318	51	1	Nil	Nil	382	9	5	1	Nil	Nil	Nil
1992-93	197	385	Nil	Nil	1	292	6	16	Nil	Nil	Nil	Nil
1993-94	4	352	1	Nil	79	344	0	16	1	Nil	Nil	Nil
1994-95	391	81	Nil	Nil	50	176	5	2	Nil	Nil	Nil	Nil
1995-96	105	Nil	Nil	Nil	Nil	Nil	6	Nil	Nil	Nil	Nil	Nil

Source : Joint Director, District Health Office - Pudukkottai District

Table 53: Facilities under the Indian Systems of Medicines (as on 1995-96) in PUDUKKOTTAI District

Facilities	Allopathy	Ayurved	Unani Medicine	Sidha	Homeopathy	Total
1. Hospitals	12	-	-	1	1	14
2. Beds	958	-	-	4	-	962
3. Dispensaries	53	1	-	1	-	55
4. Registered Practitioners	200	8	2	104	-	314
5. Colleges	-	-	-	-	-	-
6. Admission Capacity	-	-	-	-	-	-
7. PG Institutions	-	-	-	-	-	-
8. Admission Capacity	-	-	-	-	-	-

Source: District Primary Health Services, Pudukkottai.

Table 54: Percentage of Population below the poverty line in PUDUKKOTTAI District

District	Year
	1991
Pudukottai	96733

Source: Sirector of Statistics, Chennai.

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Tabel 55: Progress in development of Roads and Bridges in PUDUKKOTTAI District

Sl. No.	Category of Road	Length (Km) as on		
		1981	1991	1996
1	National Highways	Nil	Nil	Nil
2	State Highways	168	181	188
3	Major District Roads	777	657	801
4	Other District Roads	155	1817	2284
5	Ghat Roads	Nil	Nil	Nil
6	Panchayat Roads	3446	4,174.90	NA
7	Roads maintained by			
	Urban Local Bodies	Na	126.1	NA
8	Number of Major Bridges	Na	Na	76
9	Number of Minor Bridges	Na	Na	336
10	Number of culverts	Na	Na	4096

Source: Department of Highways, Pudukottai district.

Table 56: Growth of Vehicle Population in PUDUKKOTTAI District

Calegories of Vehicle	Number of Registered Vehicles in the District		
	1986	1991	1996
A.Four Wheelers	**1404**	**1654**	**3909**
1.Transport Vehicles (Buses , Vans)	253	39	513
'2.Goods Carriages (Trucks)	638	1092	2038
3.Cars	513	523	1358
B.'Three Wheelers	**77**	**168**	**368**
C. Two Wheelers	**1472**	**4914**	**19347**
Others	906	198	1,603
Total	3,859	6,934	25,227

Source : Regional Transport Office, Pudukkottai District.

Table 57: Number of Industries established in PUDUKKOTTAI District

Year	Number of Industrial established under			
	Large	Medium	Small	Total
1995-96	13	16	3055	3084

Source: District Industries Centre, Pudukkottai District.

Table 58: Emission Inventory from major industries in PUDUKKOTTAI District

Name of the Industry	Location of Units	Fuel Consumption Tonnes/d or Kl/d	Average Number of Operating Hours	Emission Rate (Kg/d)				
				SPM	SO	NO	CO	HC
Data Not Available								

Source : Environment Engineer, Tamilnadu Polution Control Board, Thanjavur Region.

Table 59: Ambient Air Quality Status of PUDUKKOTTAI District (Average of 1995-96)

Category	Location of Air Quality Monitoring Station	Pollutants (Microgram/Cubic Metre)											
		SPM			SO			NOX			CO		
		Max	Min	Av	Max	Min	Av	Max	Min	Av	Max	Min	Av
A. Rural													
B. Urban													
(i) Residential		Data not available											
(ii) Commerical													
(iii) Industrial													

Source : Environment Engineer, Tamilnadu Polution Control Board, Thanjavur

Table 60: Air Pollution Stressed areas in PUDUKKOTTAI District as on 1995-96

Area	Location Taluk and Villages	Major Air Pollution Sources
No such areas in Pudukkottai District		

Source : Environment Engineer, Tamilnadu Polution Control Board, Thanjavur

Table 61: Water Quality of surface water in PUDUKKOTTAI District

Sl.No	Characteristics	Permissible Limit	Location: Water Quality		
			Min.	Max.	Av.
1	Turbedity				
2	Suspended Solids				
3	Dissolved Solids				
4	PH				
5	Temperature C				
6	Total residual Chlorine				
7	Ammoniacal Nitrogen				
8	Total Kjeldhal Nitrogen				
9	Freee Ammonia				
10	BOD 5 days 20 C				
11	COD	**Data Not Available**			
12	Percent Sodium				
13	Residual Sodium Carbonate				
14	Cyanide				
15	Chloride				
16	Fluoride				
17	Dissolved Phosphates				
18	Sulphates				
19	Sulphide				
20	Pesticides				
21	Arsenic				
22	Mercury				
23	Lead				

Source : Environment Engineer, Tamilnadu Polution Control Board, Thanjavur

Table 62 : Discharge of Industrial effluents in river basins/other water bodies in Pudukkottai District as on 1995-96

Sl No	Name and Address of the Industry	Sector	Category	Date of Commencement of Industry	Effluent Recipient Water body		Concerned Recipient River		Effluent				
									Quality	Quantity in MLD	BOD Load		ETP Status
					Name	Distance from the Industry	Name	Distance from the discharge piont of the Recipient water body given under column(6)			Before Treatment	After Treatment	
	No such Industries in this district												

Source : Tamilnadu Polution Control Board, Thanjavur.

Table 63: Nosie Levels in PUDUKKOTTAI District

Category	dBA			Ambient Noise Stands (dBA)
	Location	Day Time (1)	Night Time (1)	
1. Industrial Area	Data Not Available			75
2. Commercial Area				65
3. Residential Area				55
4. Silence Zone (2)				50

Source : Tamilnadu Polution Control Board, Thanjavur.

Table 64: Industrial & Sewage discharges in the coastal waters in Pudukottai District as on 1995-96

Name of the Block	No. of Coastal Towns	No.of Coastal Villages	Domestic Sewage		Industrial Waste Water		Total Discharge	
			No.of Dis Points	Quantity (MLD)	No.of Disc Points	Quantity (MLD)	No.of Dischar Points	Quantity (MLD)
	No Such Industries in this District							

Source : Tamilnadu Polution Control Board, Thanjavur.

Table 65: Aquaculture Activities in Pudukottai District as on 1995-96

District	Length of Coast Line (Km)	Number of Coastal Villages & Towns	Coastal Population (1991Census)	No. of Extent Aquaculture Units (In Land)						Estimated Wastewater Generation from all Units (KLD)	
				Conventional		Semi Intensive		Shrimp			
				No.	Area(Ha.)	No.	Area(Ha)	No.	Area(Ha)		
Pudukkottai	42	29	11781	Nil	Nil	50	231	Nil	Nil	Nil	Nil

Source : Assistant Director, Department of Fisheries - Pudukkottai District.

Table 66: Wetland Habitats, their use and problems in Pudukkottai District as on 1995-96

Land Category	No.	Water Spread Area (Ha.)	Water use				Problems Identified			
			Drinking Water	Irrigation	Bathing/ Washing	Industrial	Siltation	Pollution	Weeding Station	Encroachment
Fresh Water Lakes	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
Deltaic Wetlands	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
(Including Mangroves,	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
Lagoons, Salt Swamps)	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil

Source : Tamilnadu Polution Control Board, Thanjavur.

Table 67: "Potential Hot Spots" along the East Coast in Pudukkottai District

Block	Name of Coastal City/Town/Village	Category of Land/Water Body	Ecological Significance of the area	Present Status of the area
Manamelkudi	Manamelkudi	Seashore	Forest Area	Picnic Spot

Source: Tamilnadu Polution Control Board, Thanjavur.

Table 68: Environmental NGOs in PUDUKKOTTAI District

Sl. No.	Name of NGO	Location &Address for Communication	Year of Establishment	Area of Operation	Activities undertaken
1	Indian Social Service Institute	Kaikurichi Village	1973	Pudukkottai	Non formal Education
		Thiruvarangulam			
		622 303.			
2	Rural Education for Community Organisation	TS 6922	1973	Pudukkottai	Non formal Education
		Prahadambal sannathi st.			
		Thirukogarnam			
		622002			
3	National Environment & Education Development (NEED)	Green House	1994		Environmental Education
		1/97-A I Floor, Karaiyoor			Medical camps
		622 515.			
4	Vallal Trust	Sadayampatti,	1995		
		Pudukkottai, 622101.			
5	Grama Seva Kendra	Mathur, 622 515.			
6	Village Community Welfare Society	22 A Mettu Street,	1993		
		Annavasal- 622 101.			
7	Voluntary Service and Rehabilitation Organisation	1191. North 4th street,			
		Pudukkottai-622 001.			
8	Levarage	8/30 Mettu patti			
		Kaikurichi Post - 622 303.			
9	Grama Vivasaya Matrum Membattu Sangam	16.Railway gate,			
		Thiruvappur,			
		Rajagopalapuram PO.622 003.			
10	Association for Bottom Strata	21. Samundi Madam st.	1992		
		Thirukokarnam, PO. 622 002.			
11	AIMSS	118, Goldan Nagar, Annavasal			
12	LAMP Trust	Oliamangalam - 621 308.			
13	Neem Environment and Education Management	Vadavalam PO, 622 004.			
14	WEEL Organisation	Palaniyappan Nagar, Pudukkotta	1985	Hebal Medcines	
15	Bharam Environment Seva Trust	Narthamalai- 622 101.	1987	Hebal Medcines	
16	Women Developmet Foundation	5 Nethaji St., Kamarajapuram	1998	Women Devpt.	
		Pudukkottai, 622 001.			

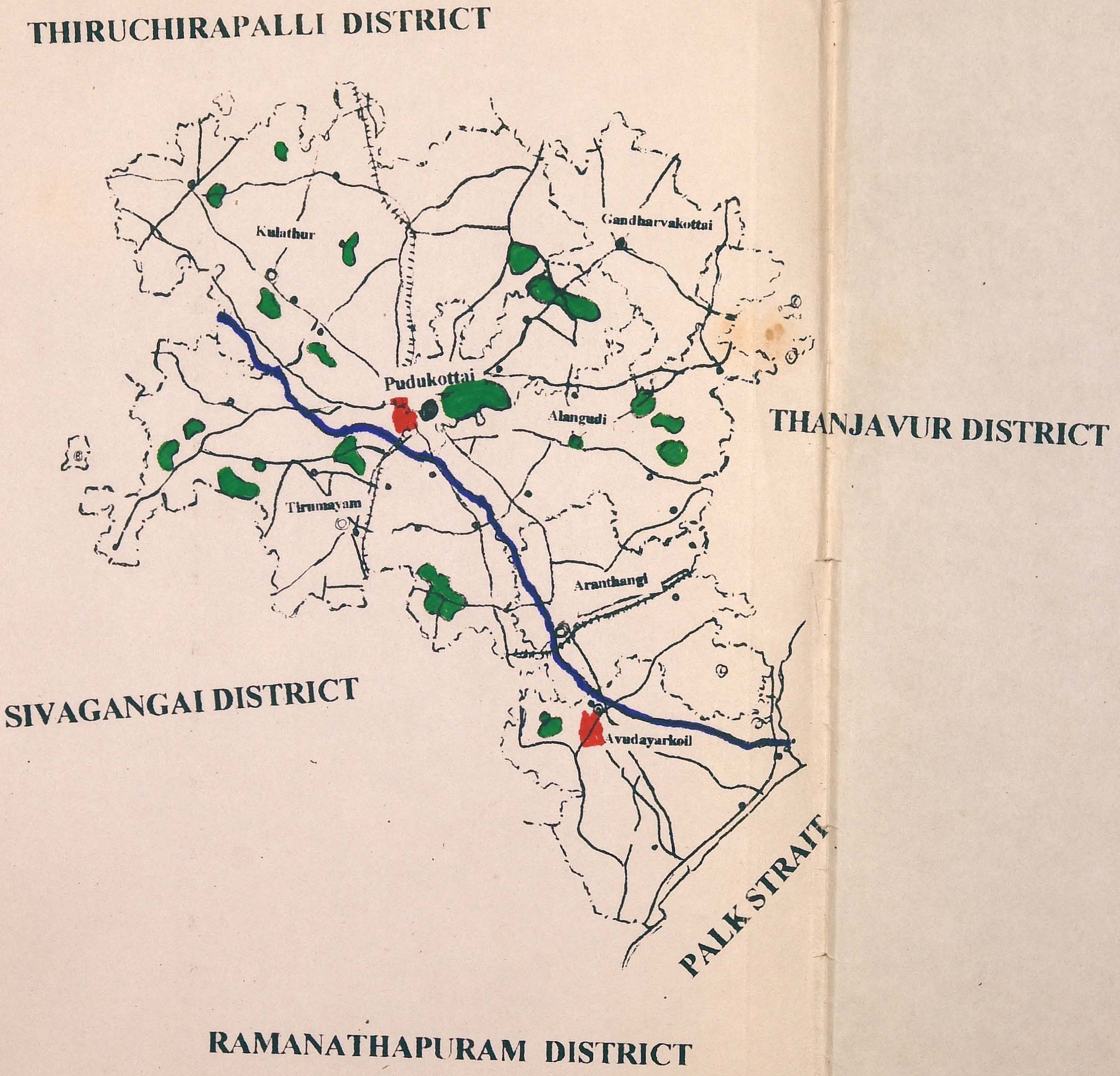
Source: Department of Environment, Chennai.

Table 69: Envirinmental Education/Research Institutions in PUDUKKOTTAI District

Sl. No.	Name of the Institutions and Address	Year of Establishment	Activities undertaken		
			Education	Research	Awareness
NIL					

Source: C.P.R Foundation, Chennai.

PUDUKOTTAI DISTRICT MAP



LEGEND

- District Boundary
- Taluk Boundary
- District Head Quarters
- Taluk Head Quarters
- National Highways
- Railway Line
- River
- Location of Major Polluting Industries
- Location of Industrial Estates
- Location of sanctuary & National Park
- Location of Archaeological Importance
- Location Post and Harbours
- Forest Area

ENVIRONMENT MAP OF PUDUKOTTAI DISTRICT

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